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**FINAL
ENVIRONMENTAL IMPACT STATEMENT
FOR THE PROPOSED
KAPALAOA CONDOMINIUM DEVELOPMENT**

Kapalaoa, Puuanahulu, North Kona, Island of Hawaii

August, 1981

**Applicant Action:
Kapalaoa, Inc.**

**Approving Agency:
Planning Department, County of Hawaii**

**Prepared by:
Environmental Communications, Inc.**

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1. SUMMARY

ACTION: Applicant Action. Petition for General Plan Amendments to change the Land Use Pattern Allocation Guide (LUPAG) Map designation for area from a Conservation designation to a Medium Density Urban designation.

APPLICANT: Kapalaoa, Inc.
c/o Arnold Abe, Attorney
Pacific Trade Center
190 South King Street, Suite 2634
Honolulu, Hawaii 96813

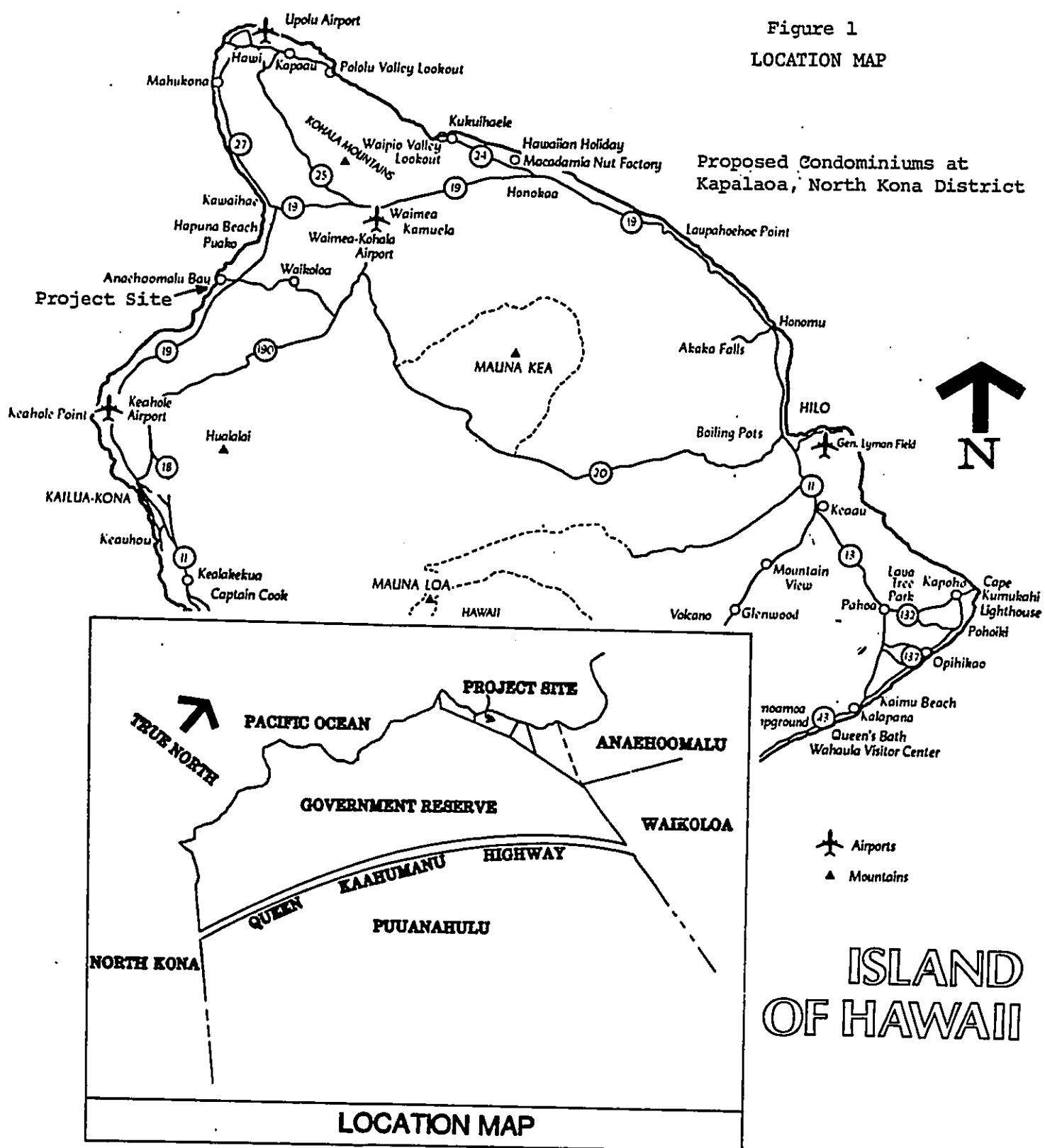
AGENT FOR ENVIRONMENTAL CONCERN: Environmental Communications, Inc.
F. J. Rodriguez
P.O. Box 536
Honolulu, Hawaii 96809
Telephone: 521-8391 (Honolulu)

APPROVING AGENCY: County of Hawaii through the Planning Department.

PROPOSED ACTION: The applicant proposes to develop a 120-unit condominium project on 15.8 acres situated at Kapalaoa (see Figure 1), Puuanahulu, North Kona on the Island of Hawaii (Tax Map Key: 7-1-03: 5, 6, and 11). The site is located along the south shore of Anaehoomalu Bay at the boundary between North Kona and South Kohala.

- SUMMARY OF PROBABLE IMPACTS:
- (1) Minimal impacts on the geology, microclimate, soils, flora and fauna are expected.
 - (2) The nearshore waters will likely be used for more water-related recreational activities. The brackish-water (anchialine) ponds will not be modified and subsequently no impact on the ponds is anticipated.
 - (3) Air Pollution and Noise will slightly increase due to residency on the project site.
 - (4) The units will be 13 feet above mean sea level to flood-proof living quarters from tsunamis.
 - (5) Land use and appearance of the site will be modified from its present open space to a low-rise condominium project.

Figure 1
LOCATION MAP



- (6) The population increase expected is about 300. Most of these will be part-time residents and will place little or no demand for various governmental services and facilities.
- (7) Employment created within the project is estimated to be equivalent to 15 to 20 full-time workers.
- (8) Revenue to the State and County will result via property, sales, excise, and fuel taxes.
- (9) An access road through State-owned land is proposed. The access road (4,000 feet) will be from Queen Kaahumanu Highway to the project site. Traffic generated by this project (500 trips per day) will have little impact because of the low traffic volume on Queen Kaahumanu Highway and the distribution of the traffic over various times during the day (no peak hour).
- (10) Electrical and telephone services will be provided through connections with the nearest available transmission lines.
- (11) Solid waste will be collected and properly disposed of by a private refuse collection company.
- (12) Potable and irrigation water will be provided by wells (within the easement to be provided by the State) pumping brackish feed water to a desalination plant. The resulting brine water will be returned to the salt water portion of the basal lens via an injection well. This will be a private water system.
- (13) A secondary sewage treatment plant will be provided on-site. The sewage effluent will be disposed of in an evapotranspiration system. This system provides a means of disposing treated effluent without the effluent reaching and contaminating the groundwater table.
- (14) The project development may be inconsistent with State plans to develop various recreational activities in the area (beach/marine parks, shoreline trail). Also, public access to the shoreline through the project has not been determined at this time.

- (15) There are nineteen (19) archaeological/historical sites/site complex on the project site. Some of these are significant; the developer will follow the recommendations of the consulting archaeologist in salvaging, excavating, or preserving these sites of significance.
- (16) The land use proposed by the project is presently inconsistent with the State's land use designation (Conservation) and the County's General Plan and Zoning. The applicant is in the process of requesting changes to these land use designations.

2. PROJECT DESCRIPTION

2.1 Statement of Objectives. The developer, Kapalaoa, Inc., finds that the property provides an ideal natural environment which would enhance a condominium development. Characteristically, the climate of the Kona coast is dry and sunny, and combined with the sandy beaches and the secluded atmosphere, has, attracted both visitors and permanent residents alike. It is anticipated that the condominium units will be sold to purchasers who will utilize their unit on a permanent or semi-permanent (part of the year) basis. These units will be priced to meet the luxury market and will be maintained by a management company.

This project, while providing residential housing, will be luxury dwelling units. Subsequently, it would be affordable to a very specific market sector. It is anticipated that the proposed project will have very little, if any impact on other housing project and housing demands in the West Hawaii region.

2.2 Technical Characteristics. The developer proposes to build a 120-unit (two-bedrooms, 2½ baths) condominium project. Housed in several three-story buildings, the units will be scattered over parcels which total 15± acres. The proposed Development Plan is provided as Figure 2.

Besides the building of the condominium structures, the developer must provide the needed infrastructures. (Presently, the site is isolated and infrastructures are not readily available.) These infrastructures include: potable water, sewage system, roadways, parking, telephone, electricity, and drainage system. A more detailed description of how these infrastructures will be provided is discussed later in this EIS.

Water required to meet domestic and irrigation needs for the proposed development will be obtained from the basal groundwater lens and treated by a desalination plant. (This is described in greater detail in subsection 5.8.4.) The water system will be built and operated in accordance with the Department of Health standards and other applicable laws and regulations.

Landscaping will be provided to enhance the natural environment. Selection of plant material will be based on their water and shade requirements, as well as their ornamental value. Wherever possible, mature trees will remain (for example, on the shoreline the coconut palms within the 40-foot setback will remain). Indigeneous plants which have shown their durability to the Kona coast environment will be selected in the landscape plan. Screen landscaping between the beachfront and the building structures will be provided to lessen the visual effects of the development from the shoreline.

In addition to landscaping, recreational facilities for residents of the development will be provided. These will include swimming pools, a pavilion, lounge, and areas of open space set aside for passive activities.

The buildings and the building materials will be selected so as to blend in with the natural environmental settings. It is felt that this building criterion will result in an aesthetically more pleasing development, rather than creating a standard concrete structure which would visually conflict with the natural environment.

The developer will not build any structures within the 40-foot shoreline setback. Also, the developer will not modify the present anchialine ponds on the project site. Important archaeological sites will be salvaged and/or preserved. (These concerns are addressed in detail in the text of the EIS.)

2.3 Economic Characteristics.

2.3.1 Potential Buyers. It is anticipated that about 75 percent of the sales of the 120 units will be made to Canadian citizens. The remaining 25 percent will likely be purchased by U.S. citizens from both mainland and Hawaii. The purchase price has not been determined. Nevertheless, it is anticipated that the price will be affordably to the upper middle and upper income families. The final price of the units will depend on the planning and construction costs, market value of equivalent units, interest rates and financial consideration, and the margin of profit. No market analysis has been prepared because of the small number of units planned and the concept of pre-selling the units.

The exclusivity and cost of the units will mitigate against speculation in the units and against the rental of these units. The developer indicates that a proposed project such as this is expected to be sold prior to the completion of construction. This should mean that the owners will be the principal occupants with some limited use by friends and relatives. It is also anticipated that the majority of the units will be purchased by more elderly buyers for use as their winter retirement home.

2.3.2 Employment Created by the Proposed Condominium Project. It is anticipated that there will be employment available in the proposed development. Approximately 15 to 20 full-time equivalent employees (permanent) will be needed to manage, maintain, and provide security for the proposed development. No employee housing is required nor will be provided.

2.3.3 Project Cost and Funding. Based on 1981 dollars, the proposed condominium development (excluding land cost) is estimated to cost \$30 million to construct. The development and infrastructures will be constructed at the developer's expense. Standard construction/development loans from commercial banks and lending institutions will be sought. No governmental monies will be utilized for this development. An access road easement through State-owned lands will be requested for the proposed action.

2.3.4 Construction Time and Phasing. The total project will take approximately 24 months to construct. The project will be built in one phase.

2.4 Social Characteristics. The project will likely have an average of 2.5 persons per unit. If it is assumed that 100 percent of the units are occupied, at any one time, the population on the project site would consist of 300 residents (full or part-time) and 15 employees for a total of 315 de facto population.

Since a large number of units are expected to be sold to Canadians, it is anticipated that they will have a semi-permanent residency. It is expected that the bulk of the units will be owner-occupied for approximately four to six months out of the year--particularly through the months of November through May. Given the probable age and income level of the future unit owners, their demands for governmental services such as schools would be minimal.

2.5 Use of State Lands. The proposed project plans call for the use of State lands; however, the exact amount of land has not been determined. The land will be needed for the well(s) to provide brackish water to the desalinization plant. Also, the access road (100-foot wide easement) will go through State-owned Conservation land. The planters for the evapotranspiration process (for the treated sewage effluent water) will be alongside the access road on State-owned land. The Board of Land and Natural Resources and the leasee (where applicable) must approve the use of the land for this purpose; a Conservation District Use Application (CDUA) approval will also be needed. At this time, the applicant/developer is still awaiting the land use change decision. Subsequently, filing for the CDUA will occur after the initial land use approvals are provided. No commitment from the State has been obtained; however, informal discussions with the staff of the Department of Land and Natural Resources (DLNR) have taken place.

A 100-foot wide easement was selected to provide adequate space for the roadway, utilities, landscaping, and for any other installation that may be required. Furthermore, a 100-foot wide easement for the roadway will afford sufficient room in the event a parkway type of entrance is desirable. The State lands proposed to be used are presently vacant. The archaeological sites on the State lands to be affected by the roadway and wells will be surveyed to prevent the destruction of significant archaeological sites. The Historic Sites Section of DLNR will be consulted and appropriate archaeological actions taken as the project proceeds.

3. AFFECTED ENVIRONMENT

3.1 Project Location. The proposed condominium development is located at Kapalaoa, south of Anaehoomalu Bay, in the extreme northern coastal portion of the North Kona District on the island of Hawaii (see Figure 1, Location Map). The 15.8-acre project site lies approximately 17 miles from Waimea Town in South Kohala, and 25 miles north of the city of Kailua-Kona. Specifically, the site is identified by Tax Map Key (TMK) 7-1-03: 5, 6, and 11.

3.2 Site Description. The project site is situated along the south shore of Anaehoomalu Bay at the boundary between North Kona and South Kohala. The parcels lie approximately one to thirteen feet above mean sea level and are predominantly flat with slopes ranging between zero to five percent.

3.3 Physical Geography.

3.3.1 Topography. The site is situated at the northern extremity of the region known as Kekaha, an open plain of lava flows of historic and prehistoric eruptions of Mauna Loa and Hualalai.

As is characteristic of this region, the site consists primarily of pahoehoe lava. The project site consists of a narrow strip of smooth pahoehoe lava running parallel to the coast, the inland side of which is bounded by an extensive rough pahoehoe lava flow. In many places, the relief dips below sea level, and numerous brackish-water ponds are present (anchialine ponds). A small sandy cove and a strip of sandy beach to the north break the otherwise completely lava coastline.

Very little soil is present except for pockets of organically derived soil. Geologically, the lava flows are of the Kau Volcanic series issuing from Mauna Loa. Lavas of this prehistoric series are highly permeable and carry brackish water along all coasts except near Hilo.

The soils of the project site are classified by the U.S. Soil Conservation Service in their publication, Soil Survey of the Island of Hawaii (Reference 1) as the following: BH - beaches, and rLW - lava flows. The publication identified above, provides the following descriptions for these soils:

Beaches (BH) are mapped as a land type. They are long, narrow, sloping areas of sand and gravel along the coastline of the island. The sand and gravel vary in color according to the material in which they are formed. The yellowish or white sand formed in coral and sea shells, the black sand formed in lava rocks, and the green sand formed in olivine. The annual rainfall is 5 to 8 inches. The mean annual soil temperature is 72° to 75° Farenheit.

Lava flows, pahoehoe (rLW), has been mapped as a miscellaneous land type. This lava has a billowy, glassy surface that is relatively smooth. In some areas, however, the surface is rough and broken, and there are hummocks and pressure domes.

3.3.2 Microclimate. The area is characterized by low rainfall, high to moderately high evaporation, high temperatures and occasional strong winds. Most of the inland portion of the coast has an arid, hot, desert-like atmosphere. Near the shoreline, however, cooler sea breezes moderate the temperature to create a more comfortable environment.

The coast, from south of Kapalaoa to Keawanui Bay in North Kohala, has an annual average precipitation of less than 10 inches, and is one of the driest areas on the Island of Hawaii.

The mean annual average temperatures in this coastal region is 78° Farenheit with relatively small daily and seasonal fluctuations. Daytime temperatures above 80° Farenheit or nighttime lows below 63° Farenheit are extremely rare. Average summer temperatures are only 4° Farenheit higher than those in winter.

Airflow is most commonly onshore from mid-morning until just before sunset and offshore from early evening until the following morning. This diurnal pattern contrasts to the relatively constant northeast tradewinds prevalent in most other areas of the State. The average wind velocity is also less--seven to eight miles per hour for the land-to-sea breeze at the South Kohala coast compared to 12 to 14 miles per hour for the trades elsewhere. As a result of this "Kona-type" wind, convective storms are quite common in the Kona area rather than orographic storms which are common throughout the Hawaiian Islands.

The trades are normally blocked by the Kohala mountains; however, they are sometimes channeled between Kohala and Mauna Kea, and from there sweep through Waimea pass and continue across the western land mass at high elevations.

Relative humidity under 40 percent is common during the later morning and afternoon hours of warm cloudless days, this is about 20 percent below values typical for most leeward areas, and 30 percent below those for windward areas. The humidity is also relatively constant all year round, showing a significantly smaller summer-winter difference than in common elsewhere.

The area is included within a hydrographic recharge area which encompasses the north slopes of Hualalai and the western slopes of Mauna Kea and Mauna Loa. There are no perennial streams within the area. Groundwater is "a thin basal lens" with the water level located generally only a few feet above sea level and with a slightly sloping water table.

3.3.3 Vegetation. Although the area is dry and with little soil formation, the lava plain does support some vegetation. This vegetation includes kiawe (Prosopis pallida) in the coastal band where basal/brackish groundwater is available, naupaka (Scaevola sericea) along the shore, and shrub ekoia (Leucaena glauca) and grasses such as pili (Heteropogon

contortus), and fountain grass (Pennisetum setaceum). No rare or endangered species or indigenous plants are known to be located within the project site.

3.3.4 Fauna. The avifauna (birdlife) likely to be found on the project site or its immediate surroundings are identified in Table 1. (Source of information, Reference 3.) The avifauna is exotic, naturalized or migratory and are commonly found in other areas. Based on the information available and site observation, there are few mammals in the area due to the lava environment. Mammals which could naturally survive in this environment are limited to rats and field mice. It is possible that the area is also inhabited by feral goats and cats. There are no known endangered or rare species of birds or wildlife on the project site.

3.4 Coastal and Marine Environments. There are several anchialine pools on the project site. Some have been filled-in through erosional processes, and other smaller pools are not permanent. The pools shown on the development plan (Figure 2) are existing and will be left in their natural state wherever possible. At this time, the development plan incorporates all the large pools with very little modification.

Based on the report, Aquatic Survey of the Kona Coast Ponds, Hawaii Island, prepared by John A. Maciolek and Richard E. Brock, general data relating to two of the anchialine ponds on the site are known. The location of the anchialine ponds or pools are shown on Figures 6A, 6B, and 6C (in the back pocket). It is believed that the two larger bodies of water (indicated on the maps) are identified by D-47 and D-48 in the cited reference. The following aquatic plants and animals are found in these ponds:

Flora: Rhizoclonium sp.

Mollusks: Melania sp.

Crustaceans: Amphipoda, other sp. greater than 1
Amphipoda, 1 reddish sp.
Macrobrachium grandimanus
* Macrobrachium lar

Insects: *Hemiptera/Veliidae, 1 sp
Acarina, 1 sp.

Fishes: *Tilapia mossambica
*poeciliidae, 1 sp.

The asterisked species are exotic; the remaining species are native. It is noted that of the three pools, two are shallow (depth of less than 5 feet) while the largest of the three is deep (greater than 10 feet, average). The pools may be part of the Anaehoomalu anchialine pools, north of the site, and appear to be the southern end of the system of anchialine pools in that (Anaehoomalu cluster). However, the reference does not cite these pools as being of any unique value in terms of its use as a resource or the aquatic flora/fauna species.

TABLE 1
PROBABLE AVIFAUNA LOCATED WITHIN THE KAPALAOA AREA

<u>Common Name</u>	<u>Scientific Name</u>
Cardinal	<u>Richmondena Cardinals</u>
Barred Dove	<u>Geopelia Striata</u>
Spotted Dove	<u>Streptopelia Chinensis</u>
Mockingbird	<u>Mimus Polyglottos</u>
Golden Plover	<u>Pluvialis Dominica Fulva</u>
Pueo	<u>Asio Flammeus</u>
Ricebird	<u>Lonchura Punctulata</u>
White-Eye	<u>Zosterops Japonica</u>

SOURCE: Atlas of Hawaii, Geography Department, University of Hawaii, 1973.

Because of the highly permeable soils and low rainfall, there are no perennial streams in the North Kona District. The nearshore waters are designated Class AA, by the State Department of Health (Reference 4). The purposes and protected uses of Class AA waters are provided below:

The uses to be protected in this class of waters are oceanographic research, propagation of shellfish and marine life, conservation of coral reefs and wilderness areas and aesthetic enjoyment.

It is the objective of this class of waters that they remain in as nearly their natural, pristine state as possible with an absolute minimum of pollution from any source. To the extent possible, the wilderness character of such areas shall be protected. No zones of mixing will be permitted in these waters.

The classification of any water area as Class AA shall not preclude other uses of such waters compatible with these objectives and in conformance with the standards applicable to them.

Although no nearshore water samples or analysis were undertaken, it is felt that the nearshore water is within the Class AA Water Quality Standards. This is based on water samplings and analyses from nearby areas and on the observation that the nearshore waters are rarely utilized for swimming, snorkeling, surfing, and other recreational uses. Since no other sources of nearshore pollution (e.g. sources such as sewage discharge, industrial discharges, harbors) are found in the near vicinity, it is very probable that the nearshore waters meet Class AA standards.

The proposed development falls within the Special Management Area (SMA) authorized through Chapter 205A - Hawaii Revised Statutes, relating to the Coastal Zone Management Program. The statute provides for additional controls over developments occurring within the coastal zone. Its intent includes the protection of natural resources and the coastal ecosystems, and adequate access to public beaches and recreational resources.

3.5 Air Quality. The air quality within the project site is dependent on: (1) the sources of air pollution in the areas adjacent to and within the site; (2) the meteorological conditions that disperse the pollutants into the area; and (3) the mixing of the pollutants that takes place within the area.

No air pollution measurements were attempted for the preparation of this Draft EIS. The Pollution Investigation and Enforcement Branch, State Department of Health, was consulted, and it was indicated that no data representative of the air quality in this region is available. Therefore, a review of pollution sources, meteorological conditions and the mixing factors (wind direction and speed) were reviewed. The results of this review were:

- (1) There are no significant sources of air pollution in the vicinity of the site. The site is several miles from populated communities, industries, or other point sources of air pollution. Emissions from automobiles produces very insignificant amounts of air pollution due to the relatively low volume of traffic. Some fugitive dust is caused by four-wheel vehicles that may sometime visit the project site. However, the fugitive dust generated by these vehicles is localized and temporary.
- (2) Although during certain times, the meteorological conditions may be conducive to creating a "smog" type situation, the probability of this occurring is very small due to the lack of significant air pollution sources, and the large air basin which acts to dilute air pollutants.

Based on these factors, it was concluded that the air quality of the project site and surrounding area meets the Air Quality Standards established by the State.

3.6 Ambient Noise Levels. The site is presently vacant, with the exception of a small, old wooden home along the beach area occupied by campers and fishermen. The use of the beach is infrequent due to the remoteness of the property from populated areas and the limited access. (There are no paved roads within the project site.) This being the situation, the ambient noise level is limited to the sounds created by the natural environment (e.g. ocean waves, wind).

3.7 Tsunami and Flood Inundation. The project site is partially (near the shoreline) located in the area of tsunami inundation as established by the Hawaii Civil Defense Agency. Although historically, there have been only a few occasions on which a tsunami has occurred along this coast (the west coast of Hawaii) portions of the development are located on low grounds.

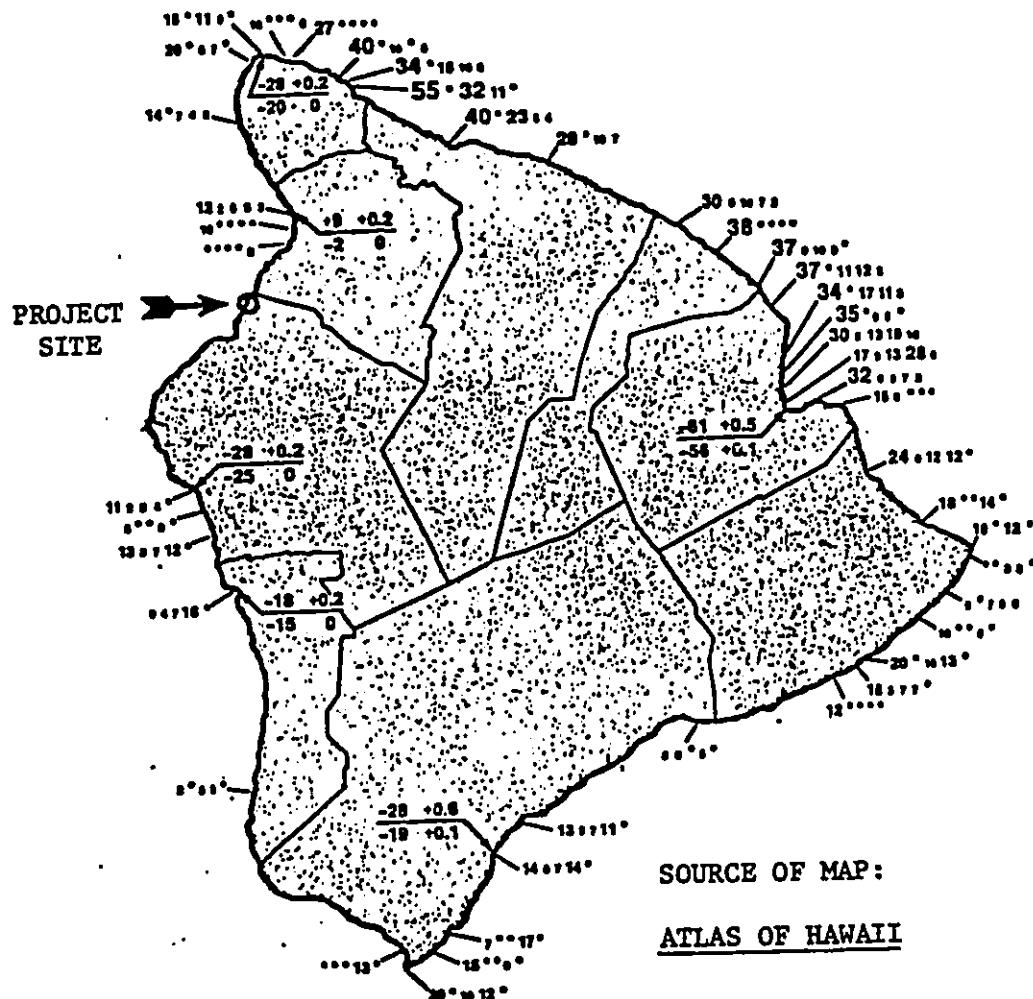
Although there is no specific on-site information relating to tsunami runup, data from nearby locations are available. Figure 3 shows the tsunami runups in the past tsunami events; Kawaihae, in South Kohala, is the nearest location where tsunami runup was recorded. At that location, the highest recorded tsunami runup was measured at 12 feet above mean lower low water level (this 1946 tsunami was generated by an earthquake in the Aleutian Islands).

Additional information on tsunami and flood hazard data was provided by the U.S. Army Corps of Engineers (letter responding to the Draft EIS, dated June 15, 1981):

"Based on the best available tsunami and flood hazard data obtained from the Flood Insurance Study (FIS) for the island of Hawaii, prepared by the Federal Insurance Administration, the project site...is subject to tsunami inundation (Zones V11 and A4) where the approximate 100-year tsunami elevation is

FIGURE 3.

TSUNAMI RUNUP DATA



TSUNAMIS AND TIDES

Recorded heights of tsunami run-up in feet
above mean lower low water datum

- (a)(b)(c)(d)(e)
0 0 0 0 0
a. 1948 (from Aleutian Islands) d. 1960 (from Chile)
b. 1952 (from Kamchatka, U.S.S.R.) e. 1964 (from Alaska)
c. 1957 (from Aleutian Islands)

Not surveyed after tsunami run-up

Tidal differences compared to Honolulu

- (a) (b)
0 0
(c) (d)
0 0
a. Time of high tide before or after Honolulu (minutes)
b. Time of low tide before or after Honolulu (minutes)
c. Height of high tide above or below Honolulu (feet or ratio)
d. Height of low tide above or below Honolulu (feet or ratio)

Source: Hawaii Institute of Geophysics, Univ. of Hawaii

7-8 feet above mean sea level...The 100-year event has a one percent chance of being equaled exceeded in any given year."

Utilizing the higher tsunami runup (12 feet) versus the Federal Insurance Administration's Zones V11 and A4 (7-8 feet), the plans call for building the dwelling units on building pads which will be approximately 13 feet above mean sea level. This "flood-proofing" measure should adequately resolve the tsunami and flood hazards. The building pads, as presently envisioned, will be created by concrete columns; these columns will also provide structural support for the buildings.

The project site also lies within an area of flood hazard. In the past there have been rare instances where a heavy rainfall over a short period has created flash flooding. The flood hazard zone in which this project lies is based on that type of condition occurring. Flooding on a periodic or annual basis is not normal, due to the normally low rainfall and the permeability of the soil.

3.8 Natural Hazards. Because of the active volcanoes on the Island of Hawaii, there are several natural hazards which exist. These include lava flows, earthquakes, and tsunamis. Tsunamis were discussed in subsection 3.7 above. In terms of danger from lava flows, it is noted that in historic time, there has been little or no danger posed from lava flows in terms of fatalities; the hazards posed from lava flows is in the area of property damage. Based on the Geological Survey document, Natural Hazards on the Island of Hawaii, 1975, the project site is within an area designated E. An E designation means that this site is within an area of second highest risk. The document describes Area E as follows:

Area E includes the flanks of Kilauea and Mauna Loa that lie directly downslope from the summit areas and rift zones where lava flows originate. Land labeled E is susceptible to burial by lava flows erupted within the summit and rift areas labeled F. In addition, vents along minor rift zones on Mauna Loa have erupted a few times within area E. Degree of risk within this area varies widely, but in general, it becomes less with increasing distance from the summits and major rift zones.

Earthquakes are associated with volcanic activity in the Hawaiian Islands. The Island of Hawaii, having two active volcanoes has received the greatest number and most severe earthquakes. Studies conducted by the Hawaii Institute of Geophysics, University of Hawaii have indicated that the entire Island of Hawaii lies within Zone 3 (Reference 5). Zone 3 is a zone of major damage corresponding to an intensity of 7 and above on the MM scale. Therefore, any development within this area must comply with the existing building codes for Zone 3, Seismic Probability Zones. It is noted that in recent years damage from seismic activity has been limited to minor property damage.

3.9 Natural Resources. Natural resources within the project site are limited to the natural white sand beach fronting the project site, the lava rock, and the unique marine life in the nearshore waters (the Draft Kona Community Development Plan notes that the nearshore waters in the vicinity of the site contains unique marine life). Another resource, from a cultural standpoint, is the archaeological sites located within the project site. Archaeological and/or historical sites will be discussed later in this EIS.

3.10 Socioeconomic Conditions. Waikoloa, in South Kohala, is the nearest established community, located approximately seven (7) miles east of the project site. Waikoloa is a residential community which presently has 200 single-family homes and about 165 condominium apartments. Its present population is about 500. Because of its recent creation and occupancy, no demographic data is available on the community. However, it should be noted that Waikoloa includes stores, recreational facilities (horseriding, golf course, and tennis courts), improved roads, a potable water system (from their own wells), electricity and telephone services, a private sewage treatment plant, and other support facilities. The proposed plans for Waikoloa include its continued growth not only within its present inland nucleus but also along its shore properties at Anaehoomalu Beach.

Although the project is located in North Kona, it is closer to the urban services and developments of South Kohala, thus socioeconomic conditions of the South Kohala area will be discussed.

Population estimates from the 1980 U.S. census enumerated 4,664 persons from the South Kohala area, an increase of 2,354 from 1970. Major portions of the population are located in Waimea, while other smaller communities are located at Puako, Kawaihae, and Waikoloa (mentioned above).

Agriculture (cattle ranching and truck farming) has been the traditional economic industry from the area. However, since the mid-sixties, tourism has developed as an alternative industry with the construction and operation of the luxury class Mauna Kea Beach Hotel. Within the past few years, the planned expansion of this industry was initiated with approvals of two other major resort communities south of Mauna Kea. Waikoloa and Mauna Lani have begun construction of the first hotels.

3.11 Existing Infrastructures.

3.11.1 Transportation Network. The principal mode of transportation on the Island of Hawaii is the private automobile. The road system in the South Kohala - North Kona Districts has been greatly improved by the two-lane Queen Kaahumanu Highway. It provides a coastal, high-speed (55 MPH speed limit), route from Hawi, in North Kohala to the city of Kailua-Kona in North Kona, a distance of 45 miles. (The section of the coastal highway from Hawi to Kawaihae is named Akoni Pule Highway.) The site is landlocked primarily by State lands.

Legal access to the project site from Queen Kaahumanu Highway (see Figure 4 in the back pocket) is via a 10-foot, non-exclusive easement over State-owned lands. The easement is at present a jeep trail which allows access to the homestead parcels from Queen Kaahumanu Highway. There are no existing paved roadways leading to the project site. Originally, the easement led to the Mamalahoa Highway and mauka Puuanahulu Homesteads. Queen Kaahumanu Highway is approximately two-thirds of a mile from the project site.

3.11.2 Electrical Services. Electricity is presently not available to the project site. There is a substation approximately 1.4 miles from the project site along Queen Kaahumanu Highway from which a major transmission line can be constructed to serve the project site. Construction of an overhead or underground distribution system on the makai side of Queen Kaahumanu Highway will be subject to easements. Or, a transmission line can be constructed from the Anaehoomalu Resort area where the Hawaii Electric Light Company, Inc. recently completed construction of a 5 MVA transformer.

During the Draft EIS review period, the Hawaii Electric Light Company, Inc., indicated that: "Another alternate route to providing electrical service to the Kapalaoa Condominium Project would be the construction of the underground distribution on Queen Kaahumanu Highway from Anaehoomalu Substation to the proposed condominium site."

Unless required, the powerlines will be overhead.

3.11.3 Telephone. Telephone service is available from the utilities corridor located east of Queen Kaahumanu Highway. Telephone service is also available from lines servicing the Anaehoomalu Resort.

3.11.4 Potable Water. There is no potable water system now serving the project site. The County's water system, at present, extends from Waimea to Kawaihae and south to Puako. The second municipal water source and system is presently being developed in Lalamilo, North Kohala. The system being planned will extend only as far south as Kalahuipuaa, a distance of approximately one mile north of the project site. The Anaehoomalu Resort will be serviced by a private water system (part of Waikoloa's water system).

3.11.5 Sewage. There is no sewage system now serving the project site. The nearest public sewage treatment plant and system is in Kailua-Kona, 25 miles south of the site. The three major resort developments to the north of the proposed project each have, or will have, privately owned sewage treatment plants and systems. Existing residential homes in the area have cesspools. However, the use of cesspools are not acceptable for multi-family or resort developments.

3.11.6 Drainage. There is no improved or man-made drainage system within the project site.

3.11.7 Medical Facilities. The nearest medical facility, a small hospital, is located in Waimea, approximately 17 miles north of the site.

3.11.8 Commercial Shopping Areas. Shopping areas are located in Waikoloa, Waimea, and Kailua, 7, 17, and 25 miles away from the site, respectively. Convenience type general stores and post offices are located at Waikoloa Village and Kawaihae.

3.11.9 Airports. Airports are located at Keahole, North Kona, 16 miles to the south, and at Waimea.

3.11.10 Public Schools. The nearest elementary and secondary public schools are located in Waimea. An elementary school is proposed for Waikoloa.

3.11.11 Police and Fire Protection. Waikoloa has a small fire engine to protect its property; this is the nearest fire protection facility. Waikoloa's fire engine is privately owned and operated and would not normally service other areas. The nearest County fire station is located in Waimea. The nearest police station is also in Waimea.

3.11.12 Public Parks and Recreational Areas. There are several existing and proposed public parks and trails in the vicinity. Anaehoomalu Beach Park is within half a mile of the project site. Plans exist for the expansion of the Park. Other existing or proposed parks in the vicinity (within a 5-mile radius) include:

Puako Petroglyphs Historic Park: proposed by the State, it has high priority.

Makaiwa Bay and Pond Reserve: proposed by the State, it also has high priority.

"Na Ala Hele" Shoreline Trail System: proposed by the State as a major shoreline trail along the North Kona, South Kohala coast.

Pauoa Bay Reserve: proposed by the State; it has high priority.

Review of the recreational areas proposed and existing indicates that this area is potentially significant in terms of establishing a continuous "park" environment along the coast for the public. That is, along this coast, the present and proposed reserves, parks, and trail system would dominate the land uses along the coastal area, if these project are implemented.

Other public recreational facilities in the South Kohala/North Kona coastal area are limited to three beach parks, two small boat harbors and a small boat launching ramp. The State operates the small boat harbors at Honokohau and Kawaihae, the beach parks at Hapuna, South Kohala, and at the Old Kailua Airport in North Kona, and a small boat launching ramp at Puako Bay. The County owns Spencer Beach Park at Kawaihae.

In addition to the public recreational facilities, there are two private golf courses and tennis courts at Waikoloa Village and at

Mauna Kea Beach Resort. Two additional golf courses are being constructed at Anaehoomalu (Waikoloa Beach Resort) and Mauna Lani Resort.

Public access to the shoreline and beaches have been made available at Kaunaoa Beach (Mauna Kea Beach Resort) and will be made available at Anaehoomalu and Kalahuipuaa through conditions of approval of the two major resort developments. Thus, while these beaches will be accessible to the public, maintenance will be a private concern.

During the Draft EIS review period, the Planning Department provided comment on recreational areas; because their comment is pertinent to this Section, it should be given consideration:

"...The discussion of recreational areas and public parks is somewhat misleading. Anaehoomalu Bay, Makaiwa Bay and Pauoa Bay have all three been noted in the State Comprehensive Outdoor Recreation Plan as recreational resource areas and reserves. There are however no specific plans by the State nor County to acquire these areas as public parks. Moreover, all three beaches are located within developing resort areas (Waikoloa Beach Resort and Mauna Lani Resort). While public access to these areas have been made available through conditions of approval of various permits and while use of the beaches will be made available to the public, nevertheless, it is not entirely correct to include them as proposed public parks."

Presently there is no public right-of-way through the project site to the shoreline. (Although this statement is included in the text of the EIS, the Planning Department, County of Hawaii, in their letter of June 17, 1981, commented:

"Nor is it entirely correct to say that there is no public right of way through the project site to the shoreline. A public shoreline access inventory prepared for the County of Hawaii through the Coastal Zone Management Program notes an ancient trail from Puu Anahulu to Kapalaoa [differing from the non-exclusive access easement]. While the legal status of the public right of way over the ancient trail is not clear, nevertheless, it is probably more accurate to note that public right of way through the property is still in question.")

During the Draft EIS review process, the State Office of Environmental Quality Control also noted that the petroglyphs are listed in the State's Recreation Plan (draft), as a resource area for potential use as a recreational or cultural site with the Kings Trail listed as part of a proposed trail system.

3.12 Archaeological and/or Historical Sites. The coastal area of North Kona and South Kohala are rich in the remains of the past. Two major studies have resulted from archaeological work conducted at Anaehoomalu and Kalahuipuaa. Excavations at Anaehoomalu revealed human occupation that began as early as A.D. 1000, and continuing

into the historic period. Kalahuipuaa material indicated initial occupation occurred there during the early A.D. 1200's.

A specific description of a settlement at the project site was given by the Reverend William Ellis in 1823.

About nine a.m. I stopped at Kapalaoa, a small village on the beach containing twenty-two houses, where I found the people preparing their food for the ensuing day, on which they said the governor had not sent word for them to do no work, neither cook any food. When the people were collected, I addressed them and after answering a number of inquiries respecting the manner in which they should keep the Sabbath-day, again embarked aboard my canoe...

At Kapalaoa, I saw a number of curiously carved wood idols, which formerly belonged to an adjacent temple. I asked the natives if they would part with any? They said Yes; and I should have purchased one, but had no means of conveying it away, for it was an unwieldy log of heavy wood, twelve or fourteen feet long, curiously carved, in rude and frightful imitation of the human figure.

A reconnaissance archaeological survey of the project site was conducted by William Barrera, Jr., of Chiniago, Inc. Because this initial survey uncovered midden deposits, shelters, petroglyphs (historic and prehistoric) and habitation caves, Barrera did a further, detailed surface study. This latter survey identified 19 sites/complexes on the site. These included petroglyphs, burials, platforms, midden deposits, cave shelters, and a trail. Surface artifactual remains indicated that the sites may have been occupied during both historic and prehistoric times. See Figure 5 for the locations and identification of these sites.

Barrera has recommended eleven (11) features (petroglyphs) for preservation, nineteen (19) sites/features for archaeological excavation, six (6) sites for sample collection, and one grave site to be exhumed in accordance with the State Department of Health's regulations.

3.13 Land Uses and Land Use Designations.

3.13.1 Existing Land Uses. The parcels were created as part of the Puu Anahulu Homesteads, Kapalaoa Section. Although there are old residential structures on the parcels, these are now vacant, and the structures on two neighboring lots are not in continuous use.

Surrounding State-owned lands are undeveloped as are lands from the North Kona boundary to Keahole Point, except for the Kona Village Resort. The Kekaha region has not been developed or utilized except for ranching in the mauka areas. Isolated beach cottages occur in some of the bays along the coast.

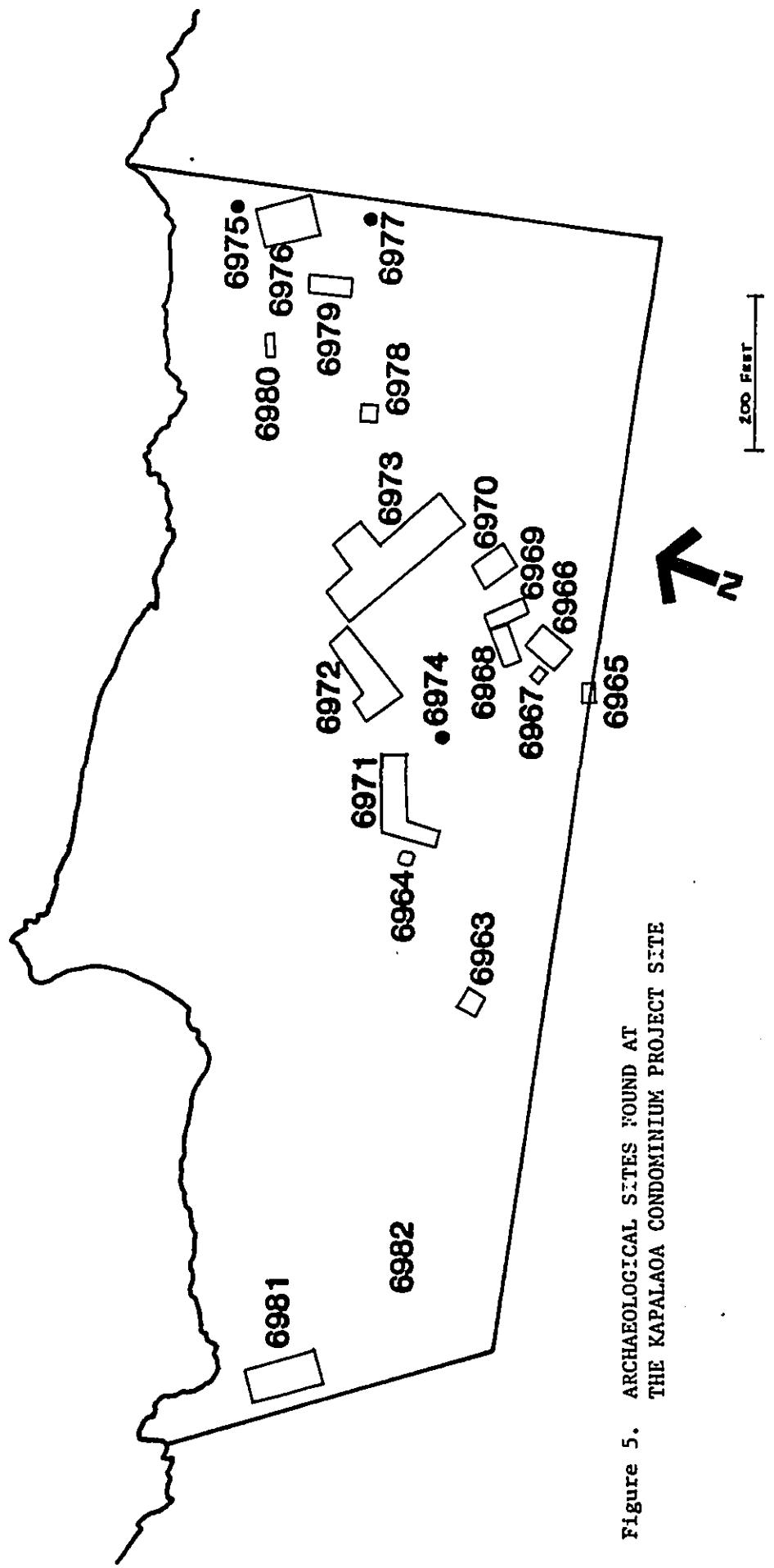


Figure 5. ARCHAEOLOGICAL SITES FOUND AT
THE KAPALAOA CONDOMINIUM PROJECT SITE

6963	Walls	6973	Petroglyphs, Modified Bedrock, Mounds
6964	Grave	6974	Petroglyphs
6965	Habitation Shelter, Wall, Mound	6975	Petroglyph
6966	Habitation Shelter, Modified Bedrock	6976	Midden Scatter
6967	Petroglyphs, Mound	6977	Petroglyph
6968	Petroglyphs	6978	Midden Scatter
6969	Modified Bedrock	6979	Habitation Cave
6970	Petroglyphs	6980	Habitation Cave
6971	Habitation Shelters, Modified Bedrock, Mound and Wall, Petroglyphs	6981	Midden Deposit, Habitation Terrace
6972	Petroglyphs, Modified Bedrock	6982	Trail
	Possible Shrine		

North of the subject parcels are the Anaehoomalu Resort, Mauna Lani Resort, and Mauna Kea Beach Resort, all in various stages of development. These developments are planned as resort communities and include a complement of hotels, condominiums, recreational and commercial uses and appropriate zones.

The Anaehoomalu Resort, at the head of Anaehoomalu Bay, marks the southern limit of this major resort designation along the South Kohala coast. Waikoloa resort properties are located approximately one mile northeast of the project site.

3.13.2 Land Use Designations. (Further discussion on the Land Use designations is contained in Section 4 of this EIS.)

State Land Use Designation: Conservation

General Plan, County of Hawaii: Open and Conservation

Zoning, County of Hawaii: Open and Conservation

4. THE RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES, AND CONTROLS FOR THE AFFECTED AREA

4.1 Conservation District Designation - State. The project site is designated Conservation by the State Land Use Commission as are lands east to Queen Kaahumanu Highway and south to Keahole Airport. Lands immediately north of the parcels are also within the Conservation District.

Under the Conservation District designation, jurisdiction over the use of the properties lies with the Board of Land and Natural Resources. There is no effective County zoning under this designation. The proposed condominium is not a permitted use within the Resource subzone (Regulation 4) of the Conservation District. Permitted uses include:

- (1) Research, recreational and educational use which require no physical facilities;
- (2) Establishment of operation of marine, plant and wildlife, sanctuaries and refuges, wilderness and scenic areas, including habitat improvement;
- (3) Restoration or operation of significant historic and archaeological sites listed on the National or State Register;
- (4) Maintenance and protection of desired vegetation, including removal of dead, deteriorated and noxious plants;
- (5) Programs for control of animal, plant and marine population, to include fishing and hunting;
- (6) Monitoring, observing and measuring natural resources;
- (7) Occasional use;
- (8) Any other government facilities not enumerated herein where the public benefit outweighs any impact on the Conservation District;
- (9) Emergency warning systems or emergency telephone system;
- (10) Flood, erosion, or siltation control projects;
- (11) Growing and harvesting of forest products;
- (12) Aquaculture;
- (13) Artificial reefs;
- (14) Commercial fishing operations.

As a result, the developers have petitioned the State Land Use Commission for a Boundary Amendment to change the designation to Urban.

4.2 County's General Plan. The County's General Plan Land Use Pattern Allocation Guide (LUPAG) Map designates the area as Open along the shoreline, and Conservation for the remainder of the lots. The proposed use is not allowable under the existing General Plan designations. A General Plan land use designation amendment petition has been submitted and is the reason for the preparation and submittal of this EIS.

Should both the Boundary Amendment and General Plan amendment be approved, a change and zone petition will be required to establish the multiple-family residential use.

Resort, Medium Density Urban, and Open designations are situated to the north of the subject parcels.

Lands to the south are designated Conservation and Open by the General Plan Land Use Pattern Allocation Guide Map, except for the existing Kona Village Resort.

Under the Medium Density Urban designation being sought by the petitioner, Multiple-Family and Single Family Residential uses, and Village and Neighborhood Commercial uses would be permissible. The condominium units being proposed qualify as multiple-family residential use. Resort hotels or time-sharing units, however, would not be permissible under this General Plan Land Use designation.

Pertinent goals, policies, and standards within the General Plan relating to Multiple-Family Residential use include:

1. "To provide for multiple residential development that maximize convenience for its occupants."
2. "Appropriately zoned lands shall be allocated as the demand for multiple residential dwellings increases. These areas shall be allocated with respect to places of employment, shopping facilities, educational, recreational and cultural facilities, and public facilities and utilities."
3. "Areas shall be located in such a manner that traffic generated by high density development will not be required to travel through areas in lesser density enroute to principle community facilities."
4. "Provide adequate access to arterial streets, shopping facilities, schools, employment centers, and other services."
5. "Development shall not be permitted in natural hazard areas unless proper on-site improvements are provided."

6. "Located in areas where public utilities can be economically provided at a level adequate to meet the demand for the concentrated service."
7. "Recreational area and/or facilities shall be considered in multiple residential development."

Discussion on the proposed land use and the goals of the General Plan, was felt to be necessary because various comments received during the EIS Consultation Period found that such a land use would be inconsistent with the State and County designation and zoning. In response to this concern, a land use analysis was prepared by Ilima Piianaia. Her analysis is provided below.

The County of Hawaii General Plan is a long-range policy document which has been formulated to portray a desirable future for the island of Hawaii. The General Plan, through its goals, policies and Land Use Pattern Allocation Guide Maps, establishes a framework for development by both the private and public sectors. In the design of the General Plan emphasis has been placed on the plan's flexibility to respond to changing circumstances and events. More detailed articulation of development guides are to be found in the County's area development plans.

For the region under consideration, the General Plan visualizes a high quality resort destination area of major proportions. The Plan specifies three subareas within this resort destination area, namely Anaehoomalu, Kalahuipua'a, and Ouli and Kawaihae 2nd. In total, these subareas, when developed, will constitute the island's primary resort region.

The designation of these areas on the General Plan LUPAG Maps follows ownership patterns and land use divisions. They are relatively specific designations, although the General Plan is intended to be a broad guide.

The project site is located just to the south of the General Plan designated resort areas of South Kohala. It is an area which, from a regional basis, is intimately tied into the South Kohala coastal resort region and, in fact, lies on the southern side of Anaehoomalu Bay which is specified for resort use in the General Plan. The extension of urban-type uses to the project site is a logical one and would not be contrary to the containment of the South Kohala resort area.

From a regional perspective, the west coast of the island of Hawaii is essentially one characterized by open space and vacant land. At its northerly and southerly extremes some agricultural uses do occur. For the most part, however, the west coast is, and is likely to remain, undeveloped. The large tracts of government-owned land and the high costs of providing an adequate infrastructure to this coast, especially water and energy, will tend to reinforce the lack of development for most of the coast. The areas which are designated for development are relatively

few and occur in clusters between Kawaihae and Anaehoomalu and between Kailua-Kona and Keauhou. Areas designated for development outside of these two major foci are of minor significance.

The proposed project would not be a significant change in the overall land use pattern established by the General Plan. It would be complementary to the planned major resort developments in the South Kohala region. All of the planned urban uses in the South Kohala region are large undertakings. The provisions of minor but related uses within the region would increase user options without detracting from the major developments, especially if they are of high quality and well-designed.

The proposed project would also not be a major extension of the resort designated areas when the area to the south of the project is examined. It can be expected that the coast between the project site and Kaupulehu will be maintained as undeveloped land with primary emphasis on its function as open space with recreational values. Any development which might occur would be for recreation, particularly for shoreline wilderness experiences, or would be of a retreat character. The County General Plan standards which call for the provision of adequate services and facilities for development would essentially ensure this.

In terms of proposed amendment to the General Plan for a medium density urban designation, the land use designations set forth by the plan essentially do not allow for the proposed use to fall into any other category. The proposed project is a small-scale, retreat residential development geared for the luxury market. As such, the petitioner has had to fit the proposed use into the most appropriate land use category as specified in the General Plan document. In essence, the General Plan does not provide for retreat residential uses and the only land use category which can be requested is that of medium density urban. It is not the intent of the petitioner, however, to establish a medium density urban development.

The urban designations of the General Plan are tailored to meet the patterns of actual urban settlements. It is the medium density category which provides for development of apartment and similar uses. This category is intended to provide for those uses which are intermediate between suburban and urban core areas. In other words, it is an integral part of desired growth patterns for cities and towns. This hierarchical designation system, however, does not provide for developments which are outside of major settlement areas and which so characterize the island of Hawaii.

The petitioner's intent is to develop a secluded residential project. The type of development pattern envisioned in the General Plan medium density urban designation would not occur in this area at the initiation of the petitioner. The proximity of the site and the nature of the property, as well as surrounding properties, in relation to quality resort areas do

not make it conducive to developing medium density urban uses as envisioned in the General Plan. For lack of an appropriate General Plan designation for the type and character of development which is proposed by the petitioner, the only designation which can be requested is medium density urban. The petitioner realizes that other uses allowed under this designation would be inappropriate and if developed would most likely have negative impacts on the designated resort areas as well as the overall land use pattern established through the General Plan. In this situation, however, it is proper for the County of Hawaii to restrict the types of uses allowed under the medium density urban designation so that the proposed project would be developed as represented.

Further, the General Plan designation essentially allows the petitioner to request the appropriate zoning for the proposed project. At that step in the planning process, actual and specific uses are spelled out. Since the medium density urban designation allows for a variety of zoning districts, the restrictions inherent in zoning can be applied so that the range of uses allowed through the General Plan are defined. This is to say that under the current planning process the uses which are broadly allowed under the medium density urban designation can be finely tuned to be in keeping with the character of the South Kohala region. This, in turn, allows for development outside of the major urban settlements to be contained and to not adversely impact the overall land use pattern for the island.

Based on the above, it is anticipated that the requested General Plan amendment can reinforce the long-range development of a major resort area in the South Kohala region without significantly expanding the urban land use pattern. With clearly articulated objectives, the approval of the proposed project need not imply a change from the direction and location of contained urban-type uses.

4.3 Coastal Zones Management Objectives and Policies. The project site is located within the Special Management Area as defined by Hawaii County Planning Commission's Rule No. 9, "Rules and Regulations Relating to Environmental Shoreline Protection of the County of Hawaii." This is equivalent to the Coastal Zone Management area. During the Draft EIS review period, several comments were made indicating that the Coastal Zone Management Objectives and Policies should be reviewed and analyzed in the EIS document. (The County's Rule No. 9 contains similar objectives and policies.) In response to this request, the CZM Objectives and Policies were reviewed and evaluated; this evaluation is included in Appendix B.

In general, it is felt that the proposed project will have impacts on the shoreline in the areas of recreational resources, historic resources, open space resources, coastal hazards and coastal ecosystems. These are unavoidable impacts and for the most part, the development plans incorporate designs and features that will minimize adverse impacts as much as possible.

4.4 Land Use Change Request. As mentioned above, the developer is presently petitioning the State Land Use Commission for a Boundary Amendment to change the land use designation to Urban. It should be noted (as per comments from the Department of Planning and Economic Development, June 18, 1981), "that both the DPED and the County of Hawaii Planning Department have testified in opposition to this boundary amendment before the LUC. It should be stated that DPED's recommendation of denial was in-part based upon the inconsistency of the project with the objectives and policies of the Hawaii Coastal Zone Management Program relating to the recreational resources, scenic and open space resources, coastal ecosystems and coastal hazards."

5. THE PROBABLE IMPACT OF THE PROPOSED ACTION ON THE ENVIRONMENT

5.1 Physical Impacts.

5.1.1 Impact on the Site's Topography and Microclimate. It is anticipated that the impact of the proposed project on the physical geography will be minimal and limited to the direct local impact (the land on which the structures will be built). The areal extent of the project will not significantly or adversely affect the area's geology, topography, microclimate, and soils.

5.1.2 Impact on Flora and Fauna. The effect on the flora and fauna will again be primarily limited to the immediate areas of the proposed clearing, structural sites, and landscaping. No significant or adverse impact on the flora and fauna are anticipated because:

- (1) no rare or endangered species of flora and fauna are known to exist in the project site or its immediate vicinity;
- (2) should the avifauna and vegetation be displaced or destroyed, similar environments exist around the project site.

It should also be noted that human habitation of the site will make discarded foods and organic materials more available for mammals (field mice, rats) and birds. Thus, this development, when completed and occupied, may well attract fauna to the project site.

Flora on the site is presently sparse; landscaping will provide a greater variety of plant species as well as enhance the environment by providing a cooling effect. Landscaping is felt to be a beneficial impact on the environment.

5.2 Impact on Water Quality and the Coastal and Marine Environment. There will be an impact on nearshore water quality. This impact will likely be limited to the recreational use of the water. Swimming, snorkeling, and other water-related sport activities are likely to occur when residents occupy the development. These water activities, while not considered to be significantly detrimental to the water quality, are likely to generate increased amounts of coliform bacteria, and nutrient materials.

Mitigation of this impact, if determined to be significantly adverse, would include limiting or prohibiting water sports along the shore, or prohibiting specific types of activities which may generate more water pollutants.

Several brackish-water (anchialine) ponds are located within the project site, and many more such ponds are scattered along the west Hawaiian coastline. These ponds are valuable landscape items and will be incorporated into the project in an "as is" condition. Grading and earthwork operations will be planned so that no drastic alterations to the ponds will occur.

The ponds possess measurable salinity and show changes in depth from tidal fluctuations, due to the permeability of the lava and their proximity to the ocean. Impact on the water level in these ponds due to basal groundwater withdrawals at the well(s) site more than 3000 feet away will be negligible.

No effects on the groundwater lens or the ponds (which are extensions of the lens) are anticipated from the wastewater disposal methods proposed for this project. The impervious liner under the planters (for the wastewater's evapotranspiration system) will contain the wastewater while evaporation and transpiration distribute the liquids to the atmosphere.

The landscape consultants will be utilizing many plants indigenous to the area. Fertilizer and pesticide use will be minimized wherever possible. While contamination from these nutrients/chemicals are possible, the specific safeguards for these pools have not been determined at this time.

5.3 Impact on Air Quality and Ambient Noise Levels. Minimal impact is foreseen in these two areas. The air basin surrounding the site is large and, because of the lack of the large population and industries, no air pollution is evident. With the increase of 120 units, a total of about 300 people are expected to be living in the development at any one time. (120 units x 2.5 persons/unit = 300.) Based on an average of one vehicle per unit and an average of four (4) trips per day per vehicle plus twenty (20) trips attributable to deliveries, employee trips, the average daily traffic from the proposed development would be 500 vehicular trips. This is a relatively small number of trips and should not result in significant air emissions. It should also be noted that travel would occur throughout the day and the traffic would very likely be evenly distributed so that no true peak hour would occur. The implementation of this project will not cause the ambient air quality to exceed the State's air quality standards.

A slight increase of noise from various activities will occur. Noise from residents will be similar to other residential areas and no significant or adverse impacts are foreseen. Unusually loud noises will be controlled via a security guard or resident manager. Construction noise should not disturb anyone except the construction workers because there are no nearby residents. This also holds true for the fugitive dust created during construction.

5.4 Impact of Tsunami and Flood Inundation. As stated, the proposed development will be built on building pads approximately 13 feet above mean sea level; this will "flood-proof" these structures. Also, the structures will all be outside of the 40-foot shoreline setback. Aside from these measures, no other flood prevention measures will be implemented. The developer intends to disclose information on natural hazards (i.e. tsunamis) to potential purchasers.

5.5 Impact of Natural Hazards. Natural disasters such as earthquakes and lava flows cannot normally be mitigated. However, for a lava flow, there should be sufficient forewarning to evacuate the project site should a lava flow in the direction of the site occur. Structural standards for earthquake zones are incorporated into building codes.

5.6 Impact on Natural Resources. The project will utilize (as building material) some of the lava on the project site. Considering the plentiful amount of lava available on the site in the surrounding area, the use of this resource is not expected to be significant.

5.7 Socioeconomic Impacts. No significant socioeconomic impacts are foreseen.

5.7.1 Population Increase. The de facto population will increase by about 300 persons. Considering the resort visitors in the area as well as the residential population, these additional people are likely to constitute less than 5 percent of de facto population.

5.7.2 Occupancy. Most of the units purchased will be used by the owner, friends and relatives for only a portion of the year (about 4 to 6 months out of the year). These people will spend most of their time within the project site or visiting the surrounding area (Waimea and Kailua-Kona). Their need for such services as schools, police protection, governmental services, etc. will be limited and minimal.

5.7.3 Revenue to the State and County. The development will increase governmental revenues in the following areas: property taxes (from employees and residents), excise taxes, gasoline and sales taxes. There will be no direct governmental expenditures for the proposed development. The revenues generated by this project also includes lease rent to the State for use of the State lands.

5.8 Impact on Infrastructures.

5.8.1 Impact on the Transportation Network. A 100-foot wide easement to be acquired from the State for roadway access purpose will run the existing Queen Kaahumanu Highway to the project site. Proposed improvements of the access include an all-weather asphaltic concrete pavement surface of 22 feet (minimum width), or two, 11-foot travel lanes. Appropriate roadside shoulders with planting will be part of the roadway section. Landscaping along a medial strip or island dividing the travel lanes will also be considered.

Geometric pavement and other design features of the access roadway will be in accordance with applicable Federal, State, and County rules, regulations and standards. The access roadway also will be constructed so that, if required, the road may be dedicated to the County. In the event the access roadway is dedicated to the County, it will become a non-exclusive access to properties in the area and will provide public access to the shoreline and/or beaches.

The length of the proposed access roadway is approximately 4,000 feet from Queen Kaahumanu Highway. The connection point at Queen Kaahumanu Highway is about 2,700 feet from the district line separating North and South Kohala. The roadway then runs North-West, towards the coast and through State of Hawaii property. The proposed access roadway route will also abut a State-owned parcel fronting the ocean.

Connection of the proposed access roadway to existing Queen Kaahumanu Highway will be planned in conformance with "Hawaii Statewide Uniform Design Manual for Streets and Highways" issued by the State Highways Division. At the intersection of Queen Kaahumanu Highway and the access road, proper channelization will be included as part of the design requirements.

A median lane will be provided at the intersection for deceleration and for storage of vehicles turning left to leave the highway. If required, an acceleration lane will be implemented for speed-change at the intersection.

Within the development, adequate circulation roadways and parking areas will be constructed to service the residents and visitors. Roads and parking will be all-weather surface improvements meeting applicable local rules and regulations. Traffic safety and efficiency will be one of the design parameters to be considered.

As stated in subsection 3.11.1, the principal highway serving the area is Queen Kaahumanu Highway which has a relatively low volume of traffic. The addition of 500 vehicular trips per day will have some impact on this facility, but because of the lack of a peak hour period and because of the resort nature of this area, the traffic is expected to be evenly dispersed during the day.

5.8.2 Electrical and Telephone Service. The developer's engineering consultant will evaluate the cost of extending the distribution system from Anaehoomalu Resort versus the construction of an underground distribution system along Queen Kaahumanu Highway from Anaehoomalu Substation to the proposed site. Depending on the costs the difficulties encountered, the developer will decide the alternative to be implemented with the staff of the Hawaii Electric Light Company, Inc. Telephone lines from Anaehoomalu Resort will be tapped to provide telephone service to the proposed development.

5.8.3 Solid Waste. The solid waste produced by the proposed development will be collected and disposed of by a private refuse company.

5.8.4 Potable Water System. Water demand required to meet domestic and irrigation needs for the development will be obtained from the basal groundwater lens and treated by a desalination plant. To establish the availability of groundwater and facilitate planning, a hydrogeologic investigation was conducted by Stephen Bowles in June 1980 for the proposed development. The purpose of this investigation was to establish:

- (1) an optimum located of a water supply well(s) to provide feed water for the desalination process;
- (2) the quality of such feed water;
- (3) an acceptable and useful means of handling secondary treated sewage efficiently;
- (4) the best method of brine disposal from the proposed desalination plant.

An investigation was conducted on the groundwater quality. A test well located at the northwest corner of the property was drilled. The water sampled and collected showed a chloride content of approximately 2000 mg/liter at the surface of the groundwater table, with the chloride concentration exceeding 7000 mg/liter at elevation -10 feet. Sea water salinity (19000 mg/liter chloride or 36000 mg/liter total dissolved solids) is expected at elevation -40 feet. The salinity values obtained are typical of the brackish water transition zone of the basal groundwater lens.

Because of the low rainfall (less than 10 inches annually) there is no known potable water (less than 250 mg/liter chloride content) existing within a radius of 5 miles of the project site. Although there is a transmission line nearby from Waikoloa, obtaining water from it is unlikely as the supply has been committed to other existing or planned developments. Accordingly, the most feasible source of potable water is a desalting system, most probably the reverse-osmosis method. Experience as related by manufacturers of the R.O. system indicates that the reverse-osmosis system functions most efficiently when the feed water contains less than 1500 mg/liter chloride.

The nearby Anaehoomalu golf course is supplied by a dug well, elevation +50 feet above mean sea level, located just mauka of the Queen Kaahumanu Highway, approximately a mile east of the proposed project access road. A sample of water from this well shows a chloride content of 872 mg/liter. Such water quality may be expected at the project access road and Highway intersection, and this is the optimum location for feed water supply wells.

Based on the hydrogeologic investigation results, the depth of feed water supply wells will be limited to less than elevation -10 feet. The top of the groundwater table is found at +2 feet. The proposed Kapalaoa well will be located at elevation +40 feet above mean sea level.

The proposed project domestic water demand is estimated to be 40,000 gallons per day. There are several R.O. desalination plants on the market capable of supplying the project.

Assuming the plant passes 80 percent of its supply volume as potable water and 20 percent as high salinity brine, it will be necessary to treat some 50,000 gallons of water daily for domestic uses. Although the domestic demand is relatively low, the irrigation requirement may be as much as 200,000 gallons per day (gpd). It is estimated that two wells capable of pumping 150 gallons per minute (gpm) each will be more than sufficient to meet this need. The fire flow requirements will best be met by shallow on-site wells. As per the County of Hawaii, Department of Water Supply system standards, the fire-flow requirements for single-family dwellings is 1,000 gpm (gallons per minute) for a 1-hour duration. This is 60,000 gallons per day (gpd).

The potable water system will be built and operated in accordance with the Department of Health standards and other applicable laws and regulations.

With the above figures for feed and output water supply rates, some 50,000 gpd of high-salinity brine will be produced. Bowles' report (1980) states:

"Because the proposed R.O. plant is on site, the filtrate (brine) must be disposed of within the property. An injection well, cased to elevation -50 feet, will place the brine into the salt water zone under the brackish lens and will have little or no effect on the lens. Although the brine (high density) will not flow to the sea directly, it will mix with the salt water as a result of tidal fluctuations and, because of the small volume, essentially disappear. The very high permeability of the lava aquifer (brackish and salt) combined with the tides, will work in favor of a complete and undiscernible dispersion."

Several investigators* have estimated the basal groundwater flow rate to be between one and six million gallons per day per mile of coastline in this general vicinity. A groundwater flux rate of three million gallons per day per mile of shoreline is believed to be reasonable.

The proposed project adjoins the coast for about 1,500 feet, or 0.28 mile. Beneath the project site, then, flow some 0.9 MGD (million gallons per day). If the total project demand for feed water is 0.3 (50,000 gpd for domestic use, 250,000 gpd for irrigation) the basal flow beneath the project location can be expected to easily sustain this withdrawal.

* Cox, et al. "Coastal Evidences of Groundwater Conditions in the Vicinity of 'Ana'eho'omalu and Lalamilo." Technical Report 24, Water Resources Research Center, University of Hawaii, 1969.

Bowles, S. "Evaluation of the basal brackish lens between 'Anaeho'omalu Bay and Kawaihae Hawaii," report prepared for Belt, Collins & Associates, 1974.

Kaneshiro, B. and Peterson, F. L. "Groundwater Recharge and Coastal Discharge for the Northeast Coast of Hawaii." Technical Report 110, Water Resources Research Center, University of Hawaii, 1977.

The proposed wells (that will provide the feed water for the R.O. process) will be located within the easement to be acquired from the State for the access roadways. A small area located near Queen Kaahumanu Highway will be used as the location for the wells where brackish water will be drawn.

It is estimated that three million gallons of groundwater flows per day under the project site; this means that about 10 percent of the water will be withdrawn per day. Preliminary investigations indicate that there will be little or no change to the anchialine pools and that the aquatic life in the pools should not be affected by small changes in the salinity.

Water samples will be conducted as required. A preliminary investigation indicates that the quality of Kapalaoa water should be less than 1,500 mg/l of chlorides. Also a R.O. system can treat water with up to 5,000 mg/l of chlorides. The water for fire flow will come either from well(s) on site or booster pump by-pass of the R.O. plant. The wells will be drilled to 10 feet below the groundwater table. The wells will be used mainly for fire flow. The number of wells drilled will be dependent upon the amount of water available to meet the various demands. The preliminary engineering report states that an injection well, based on elevation -50 feet below mean sea level, will have little or no effect on the lens. The brine will mix with the salt water and essentially disappear, hence no affects to the anchialine ponds are anticipated.

5.8.5 Sewage Treatment and Disposal. Based on sewage generation calculations, the proposed development (average 2.5 persons/unit) will generate an average daily flow of 30,000 gallons and a maximum daily flow of 250,000 gpd (a factor of 5 times the average daily flow). A conventional secondary sewage treatment plant is planned for waste disposal. The facility might process the complete domestic wastewater load or handle only black water with grey water going directly to irrigation.

Following secondary treatment, the effluent will be disposed of in an evapotranspiration (ET) system. This system provides a means of disposing of treated effluent without the effluent reaching, and contaminating the groundwater table.

The ET system consists of a planter or planters created over an impervious liner. Effluent is distributed to the porous planter fill via perforated pipes in gravel jacket. The porous fill is topped with layer of topsoil which supports grasses, shrubs, and plants selected to handle the nutrient load. Liquids are handled by evaporation from the soil and transpiration by plants.

Design calculations indicate the feasibility of this proposal and the size (for a two-foot deep bed, 2.09 acres) of the planter required. Roadside shoulders near the project parcel will be used for the evapo-transpiration of treated wastewater. Roadside shoulders will be used as planters with below-grade linings. Landscaping in these planters will be high nitrogen consuming species. Soil evaporation together with the plant transpiration will provide zero discharge into the ground.

During the Draft EIS review period, concern about the sewage effluent impacting the anchialine ponds and coastal waters was indicated. Based on discussions with the project engineers, it is noted that the waste treatment system will separate the sewage into solid waste and wastewater. The solid waste material (from the treatment plant) will be treated and disposed of in accordance with State and County standards, while the treated wastewater will be mixed with other waters to irrigate the planter areas. The planters will be lined with an impervious liner to prevent the wastewater from leaching into the groundwater; therefore, no potential impacts on the anchialine ponds are expected.

Comments from the University of Hawaii's Water Resources Research Center on the desalination plant stated:

"3. The developers should consider electrodialysis (ED) as an alternative to reverse osmosis (RO) for water treatment. Although RO systems are efficient with feed waters less than 1500 mg/l chloride, energy-wise the breaking point between RO and ED is at 1200 mg/l chloride. ED is more energy efficient below this level. A study of existing wells in the adjacent areas showed that the chloride content was less than 1200 mg/l (see Water Resources Research Center, University of Hawaii, Technical Report 105: Hydrologic and Ecologic Inventories of the Coastal Waters of West Hawaii)."

In response to this request for considering an alternative water treatment system, the project engineers noted that while the ED alternative saves energy, the RO system offers some distinct advantages in that a system has been constructed and made operational in the State of Hawaii and a local supplier experienced with RO applications is available. Also, the operations and maintenance of the RO system is simpler and requires less attention than the ED system. For these reasons, the engineering consultants felt that the RO system is more suited for this project than the ED system.

The sewage disposal system will have a back-up system to temporarily treat or store the sewage. The effluent will collect in the available storage facilities in the sewage disposal system and await processing. The swimming pool water can be "blended" into the irrigation water. The planters will be put on the site as required to treat the wastewaters. The drainage of grease and oils will be controlled by limiting the areas that the cars can be washed (the major source of grease and oil), also berms and ditches will direct surface runoffs away from the anchialine pools. Finally, grease traps will be constructed as needed to control the grease and oils into the sewage system.

5.8.6 Drainage Proposed. No improved system is proposed. The present natural drainage system will be adequate for the proposed project since the ground is permeable and water should not collect on the surface.

5.8.7 Medical and Commercial Facilities. There are plans for a general store to meet the basic needs of the transient community. This privately operated store will provide basic foodstuffs, sundries, toilet articles, newspapers, and magazines. Emergency medical services will be provided on-site but will be limited to minor first-aid treatment since the major medical services must be provided at a licensed hospital. Routine medical check-ups can be obtained at Waimea or Kailua-Kona if necessary.

5.8.8 Impact on Police and Fire Protection Services. Police and fire services are located at Waimea and Kona which are quite far from the proposed project site. The applicant is planning to provide basic security with the on-site employees performing security and nightwatch services. Also, the project employees will be trained in the use of fire fighting equipment that will be located strategically throughout the project site in the form of hydrants and wall mounted fire hoses on each building module. In addition, the structural improvements will be for the most part, fire-resistant materials (concrete plank flooring, stucco walls, Monier tile roofs). For events of a serious nature that would require the services of either the County Police or Fire Departments, the call and response time is estimated to be 15-30 minutes or longer.

5.8.9 Impact on Public Schools. As indicated, there will be a very small number of children living in the proposed development. Many of the school-aged dependents would attend private schools if they reside in the development all-year round. Consequently, a minimal impact is anticipated on the public schools.

5.8.10 Impact on Public Parks and Recreational Areas. Impact in this area is adverse because of the following reasons.

- (1) The State and County have many proposed plans for a beach park and/or reserves, and a shoreline trail to be implemented in this area. The proposed development may be affected by the overflow of beach and trail users that may trespass through the property.
- (2) The question of access through the property, even if it is presently unavailable, must be examined. If, as the Kona CDP identifies, there is unique marine life near-shore, governmental agencies may question the prudence of a private access and development adjacent to such a resource.
- (3) Either the State or County government may be interested in obtaining the project site for either Anaehoomalu Beach Park or the "Na Ala Hele" Shoreline Trail System. This possibility should be further discussed with appropriate State and County officials.

For these reasons, it is felt that further discussions with governmental officials are necessary. At this time, given the present information and proposed plans, the proposed project conflicts with a public recreational use of the area.

In regards to public access, we note that at the present time, the developer is in the initial stages of the project development. When the land use changes requested are approved, the developer will pursue specific details of public access to the shore.

It is also noted that state-owned lands are located nearby and public access through that property may be more appropriate. The public access through the project site will be discussed and coordinated with the Department of Parks and Recreation as the project proceeds.

5.9 Impact on the Archaeological and/or Historical Resources.

Barrera's archaeological report (Section VI) identified the significance of the sites and made specific recommendations for either salvaging or preserving these sites or features. Appendix A, provides a copy of Section VI of Barrera's report for the reviewer's information.

These recommendations were provided to the developer; the developer has concurred with these recommendations and will implement the courses of action suggested prior to the construction of the proposed project. In summary, the recommendations include:

- (1) Preservation of the petroglyphs; the petroglyphs will likely be removed, relocated and displayed within the project development.
- (2) Reinternment of human remains as per the State Department of Health regulations.
- (3) Salvaging of habitation caves if the development will disturb/destroy these features.
- (4) Salvaging rock and midden deposits from modified pahoehoe features.
- (5) Excavation of habitation features (should the project plans include development of these sites).
- (6) If walls and mounds are to be destroyed by the construction, they should be dismantled and any midden materials found beneath them should be saved for analysis.
- (7) The habitation terrace, if planned to be disturbed by the development, should be archaeologically excavated.
- (8) The midden scatters and deposits should be archaeologically excavated if the development plan call for construction on these sites.

During the Draft EIS period, several comments were made on the archaeological sites within the access road corridor and the potential impacts on those archaeological sites. Specifically, the Planning Department, County of Hawaii, commented (their letter of June 17, 1981):

- "2. With respect to informational requirements as outlined in the EA/Notice of Preparation of a full impact statement, we find that the Draft EIS has not identified archaeological sites within the access road corridor, nor discussed the potential impacts, if any. Further although the text notes that recommendations of the reconnaissance survey will be followed it is not clear whether the petroglyphs will indeed be preserved. No site development plan with a superimposition of the archaeological sites has been included."

In response to their comments, the following information is being provided.

The access road alignment was revised initially based on the archaeologist's recommendation to avoid a ramp feature along Kings Trail. Upon approval of the initial land use designations, the developer will have the archaeologist survey the new alignment to determine if archaeological features are present. If significant features are present, the alignment will be modified or other mitigation measures implemented. These mitigation measures will be coordinated with the Historic Sites Section of DLNR. A map showing the superimposition of archaeological sites on the development plan was not included because almost all of the sites will be affected. Subsequently, such a map would be too generalized for inclusion into the EIS. Also, reviewing Figures 2 and 5 would provide an overall indication of the project's impact on archaeological sites. The petroglyphs will be preserved; they will be carefully removed from their original site and will likely be relocated to another part of the site so that they can be properly displayed and maintained.

5.10 Impact on Land Use and Land Use Controls and Plans. Implementation of the project plans will significantly alter the present use of the land. This alteration will not only change the physical use of the affected property, but will also change significantly the underlying land use designations presently in effect. As proposed, the action will require District Boundary changes at the State Land Use Commission, the amendment of the Hawaii County General Plan, the specific zoning request necessary for multiple residential use, and finally, compliance with the Draft Kona Community Development Plan. This Plan requires that development be provided in areas that are able to provide support facilities. At the present time, there are no provisions for this project within the Draft Kona CDP.

At the present time, the objectives of the CZM policies clearly state the permitted uses as they apply to proposed public recreational uses and the preservation of historical and archaeological features of the District. The CZM review process will be reviewed at a later date when more specific proposals (eg. public access to the beach, recreational resources) are prepared by the developer.

5.11 Impact on the View Planes. Impact on the view plane from the mauka areas will be affected. However, given the low profile of the structures and the gentle sloping of the coastal lowlands, the structures will be barely visible from the Queen Kaahumanu Highway. Views from higher elevations (mountainsides) toward the shoreline will be minimally affected due to the small size of the project site in comparison to the surrounding barren lava environment. The view of the project site should be comparable to the view of Kona Village Resort, and other small resort/residential areas on the West Hawaii coastline. The view of the project from the ocean (looking towards shore) will be visible from passing boats and beach users. The impact on the existing views is unavoidable. However, such an impact is not found to be detrimental or adverse.

6. ANY PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Section 5 of this EIS identified and discussed the probable impacts (both beneficial and adverse) of the proposed development. Below, the specific adverse impacts are listed.

1. The land use will be modified. The appearance of the site will alter from its present open space to a number of structures and man-made infrastructures. Most of these structures will not be seen from the Highway; however, at certain locations from the mountains and highways and from adjacent coastal areas, the development of this site will be obvious.
2. Because the residents and visitors will more frequently use the nearshore waters for swimming and other water sports and because of their proximity to the shore, bacteria and nutrient materials will likely increase. However, this increase is not expected to be significant.
3. Slight increases in air emissions (primarily from the automobiles going to and from the project site) and noise (from human activities) will occur.
4. Brackish water will be withdrawn from the basal lens and treated in an on-site desalination plant.
5. Police, fire protection services, emergency medical services, commercial facilities, and other governmental services are not convenient to the project site.
6. Archaeological and historical resources will be destroyed or disturbed; however, the sites and features of significance will be preserved or salvaged, as recommended by the consulting archaeologist, see page A-5.
7. The proposed project appears to be contrary to the State's and County's plans to develop this coastline into a continuous park system. The project, if implemented, curtails other uses of the project site.

7. ALTERNATIVES TO THE PROPOSED ACTION

At this time, the developer and architectural consultants have revised the plans from a maximum 200± units to the present 120-unit plan. The unit size and amenities and setbacks were the primary items that lead to the reduction. This will allow the units to be placed farther apart and be connected through a series of footpaths to other units, the lobby, general store and other amenities.

The developer has not considered other uses (such as hotel, low- or high-rise) for this project. It was felt that these uses would be inappropriate for the land use policies applicable to this property. Also, the market for these units is well-defined. A hotel or resort complex would involve different financial arrangements and commitments.

Single-family residential and private recreational uses of the project site were not considered viable alternatives to the private developer because of the cost of construction and unfamiliarity of such operations (private recreational use of the land).

A do-nothing alternative is available; a do-nothing alternative will allow the present site conditions to be maintained.

8. THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT
AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY AND
ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The proposed action will result in a significant change from the site's present land use (from open space to a low-rise condominium development).

The proposed action will use or comment the following resources:

- (1) Land. The 15.8-acre site will be a long-term commitment to residential (multi-family) use. Once this use and density has been achieved, it is likely that this investment will be viable over a 30+-year period. It is rare that once a site has been developed, the use of site is downgraded. The use of this site forecloses other future use options of the land.
- (2) Labor and Construction Materials. Labor will be the primary human resource used. Labor in the form of planning, designing, engineering, and construction will be utilized during a short-term period. In the long-term period, labor related to management, building maintenance and security, real estate sales, and other services will be required. Although labor will be used, this resource is renewable and will be compensated.
- (3) Consumption of energy, water, and use of public facilities and services. The project will place additional demands on energy, water resources, police and fire protection services, and public and private recreational areas and facilities.
- (4) Open space and recreational value of the project site. The open space and recreational value of the project site is a resource. The proposed project will foreclose the future land use options for the project site for a public park or reserve. The project will result in the loss of the natural view of the coastal area.
- (5) Historical and cultural resources. The proposed development will result in the loss of historical and cultural resources. However, wherever possible significant historical/archaeological sites and features will be preserved or excavated.

9. MITIGATION MEASURES PROPOSED TO MINIMIZE ADVERSE IMPACTS

The following mitigation measures will be implemented for those probable adverse impacts anticipated (identified in Section 6):

1. Standard construction practices will be employed to mitigate fugitive dust (eg. wetting down the affected area), noise (eg. no excessive gunning of construction equipment), and proper disposal of construction wastes.
2. If the use of the nearshore water results in significant degradation, limited water-related activities could be requested by the management.
3. Air and noise emissions from vehicles will be mitigated because of the Federal laws requiring new cars to have less air and noise emissions. As these newer cars are added to the vehicular fleet, the overall air and noise emissions from this source will be lessened.
4. There will be zero discharge of the sewage effluent. The concentrated brine water remaining after the feed water is treated will be discharged back into the saltwater portion of the basal lens.
5. The archaeological and historical sites/features of importance will be preserved or salvaged as indicated in Appendix A. The developer will continue detailed archaeological work efforts only upon the approval of the initial land use change requests. Detailed mapping and other archaeological requirements imposed by the DLNR will be prepared and provided as the project proceeds.
6. During the Draft EIS review period, the State Department of Planning and Economic Development, commented:

"The project site lies within a flood hazard and tsunami inundation area. Flood insurance rate maps indicate that the site is located on a 100-year flood plain within the coastal high hazard area. Although some mitigation measures have been proposed in the EIS, further assurances are needed that the development will be in full compliance with the County-implemented requirements of the Federal Flood Insurance Program."

At this time, it is too early to develop detailed mitigation measures and incorporate them into the project plans. However, it should be noted that as the project proceeds, mitigation measures will be prepared in accordance with Federal, State, and County requirements.

Other mitigation measures that may be attached as a condition for a
approval of permit may also be included to those indicated above.

Other mitigation measures that may be attached as a condition for a
approval of permit may also be included to those indicated above.

10. AN INDICATION OF WHAT OTHER INTERESTS AND CONSIDERATIONS OF GOVERNMENTAL POLICIES ARE THOUGHT TO OFFSET THE ADVERSE ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

The height, setbacks, and use will be determined by the zoning restrictions (if rezoning is granted). The sewage treatment plant and disposal of effluent must comply with the Public Health Regulations, Chapter 38. Other regulatory requirements (eg. fire protection devices, building design and structural support, access to the highway, public access) must be incorporated into the development plan. To this extent, it is felt that the compliance and mitigation measures within governmental policies are inherent in the present project plan.

Other approvals and permits required may have further detailed conditions which the project must implement. This includes the Coastal Zone Management (Special Management Area) review.

11. ORGANIZATIONS AND PERSONS CONSULTED DURING THE EIS PREPARATION PERIOD

11.1 The EIS Preparation Notice. The EIS Preparation Notice was prepared by the Planning Department, County of Hawaii, based on the information obtained from the Environmental Assessment submitted by the applicant. The EIS Preparation Notice is dated March 11, 1981. In accordance with the "Environmental Impact Statement Regulations," the Notice was filed with the State Environmental Quality Commission (EQC). The Notice was included in the EQC Bulletin of February 23, 1981. The Regulations call for the Notice to appear in the EQC Bulletin; interested parties may then request a copy of the EIS Preparation Notice. If a request is received to review the Notice, the reviewer is given 30 days (from the date of the request) to provide comments. In addition to reviewers requesting a copy of the Notice, the applicant or his representative is expected to circulate to various governmental and civil agencies, and other interested parties a copy of the Notice. In conforming with the latter process, the environmental consultants, Environmental Communications, Inc. (ECI) distributed copies of the EIS Preparation Notice to various agencies identified in Table 2.

11.2 Comments Received on the EIS Preparation Notice. A total of nine (9) letters were received in response to the EIS Preparation Notice. Of these written responses, two (2) agencies had no comments to provide at this time, and two (2) had requested that their association be included on the Distribution List for the Draft EIS. In most cases, the comments identified specific concerns that should be addressed in the EIS. These concerns included: the traffic congestion problem, water quality impact, detailed discussion on the sewage treatment plan, and socioeconomic impact. Table 2 identifies the agencies to whom copies of the EIS Preparation Notice were sent, the date of the comment, and the date of the response to the comment (if necessary).

Reduced, half-size copies of the letters received and ECI's responses to comments are provided in this Section, Pages 49 to 49.

TABLE 2

KAPALAOA CONDOMINIUM DEVELOPMENT
AGENCIES INVOLVED IN THE CONSULTATION PERIOD

<u>Agency</u>	<u>Date Notice Mailed</u>	<u>Date of Comment</u>	<u>Date of Response</u>
<u>State of Hawaii</u>			
Department of Land & Natural Resources, Division of Land Management	3/11/81	--	--
Department of Land & Natural Resources, Historic Sites Section	3/11/81	4/10/81	4/15/81
Department of Land & Natural Resources, Land and Water Development	3/11/81	--	--
Department of Health	3/11/81	--	--
Department of Transportation	3/11/81	--	--
Department of Planning and Economic Development	3/11/81	4/09/81	4/28/81
<u>County of Hawaii</u>			
Department of Public Works	3/11/81	3/20/81	3/23/81
Department of Water Supply	3/11/81	4/10/81	*
<u>Federal</u>			
U.S. Department of Agriculture, Soil Conservation District	3/11/81	4/02/81	*
<u>Utilities</u>			
Hawaii Electric Light Company, Inc.	3/11/81	3/17/81	3/18/81
<u>Other Organizations</u>			
Puako Community Association	3/11/81	--	--
Waimea-Kawaihae Community Association	3/11/81	--	--
<u>Parties Requesting Copy of EIS Preparation Notice</u>			
Mauna Lani Resort, Inc.	3/16/81	--	3/20/81
State Representative Virginia Isbell	4/09/81	--	4/09/81
John M. White, Hawaii Land Consultant	4/10/81	--	4/10/81

An asterisk (*) indicates that the agency had no comments to offer.



DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
25 AUPUHUA STREET • HONOLULU, HAWAII 96720

April 10, 1981

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P. O. Box 636, Keaau, HI 96750

April 2, 1981

Environmental Communications Inc.
P. O. Box 536
Honolulu, HI 96809

EIS PREPARATION NOTICE
KAPALAOA, INC.
TAX MAP KEY 7-1-03-05, 06 AND 11

The Department of Water Supply has no water system in the area.

R. J. Rodrigues
Environmental Communications, Inc.

P. O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodrigues,

Subject: Proposed Condominium Project at Kapalaoa

In reviewing the EIS Preparation Notice for the above project we
see no soil or water related problems.

Thank you for the opportunity to review this document.

Sincerely,

Gary K. H. Kau
Gary K. H. Kau
District Conservationist

cc: Planning Dept., City of Hawaii

Wm. Sennake
H. William Sennake
Manager
QA

cc - Planning Department, County of Hawaii

No Response Required

No Response Required

OK

APR 3 1981

... Water brings progress...
APR 14 1981

HAWAII ELECTRIC LIGHT COMPANY, INC.
P. O. BOX 1027 HILo, HAWAII 96720



ENV 2
H-W/R

ENVIRONMENTAL
COMMUNICATIONS
INC.

F. J. RODRIGUEZ
PRESIDENT

March 17, 1981

Environmental Communications Inc.
P. O. Box 536
Honolulu, Hawaii 96809

Attention: Mr. F. J. Rodriguez

Subject: Proposed Condominium Project at Kapalaos, N. Kona

Gentlemen:

Reference is made to your letter dated March 11, 1981 transmitting the environmental impact statement for the proposed condominium project at Kapalaos, N. Kona.

In reviewing your environmental impact statement, we find that the following statement was made, "electricity and telephone transmission lines will be constructed within the road right-of-way from Queen Kaahumanu Highway to the development site". It should be pointed out that the closest electricity available to your proposed development site is the Anaehoomalu Resort.

We have just completed construction of a 5 MVA transformer that will supply electric power at 12.4 KV to the Anaehoomalu Resort area. Although no scale was provided on the map, the project site indicates that it is relatively close to Anaehoomalu. If this source at Anaehoomalu is not tapped for electricity, a major transmission line will have to be constructed from our existing transmission line located approximately 3,000 feet mauka of Queen Kaahumanu Highway down towards the highway with a substation to be located just mauka of the existing highway similar to that of Anaehoomalu.

We strongly suggest that the consultant doing the electrical engineering for this project contact HELCO to obtain specific requirements for electric service for this area.

Very truly yours,
Alva K. Nakamura
Alva K. Nakamura
Manager
Engineering Department

AKN:bk

March 18, 1981

Mr. Alva K. Nakamura, Manager
Engineering Department
Hawaii Electric Light Company, Inc.
P. O. Box 1027
Hilo, Hawaii 96720

Dear Mr. Nakamura,

Subject: EIS Preparation Notice for the Proposed Condominium Project at Kapalaos, North Kona

We have received your letter of March 17, 1981 regarding the abovementioned EIS Preparation Notice.

We will consider the alternative of hooking up to the electricity available at Anaehoomalu when the electrical consultant is retained and reviews the electrical requirements for the proposed project. The electrical consultant will coordinate the project's plans with your company.

Very truly yours,

F. J. Rodriguez
F. J. Rodriguez

cc: Planning Department, County of Hawaii
Environmental Quality Commission
Arnold Abe, Esq.

FJRCKT:p1

MAR 18 1981

1152 BISHOP BLDG., SUITE 306 • P.O. BOX 194 • HONOLULU HAWAII 96814 • TELEPHONE (808) 541-4311



DEPARTMENT OF PUBLIC WORKS

COUNTY OF HAWAII 25 AUPUNI STREET • HONOLULU HAWAII 96720 • TELEPHONE 551-4321

March 20, 1981

Environmental Communications, Inc.
P.O. Box 536
Honolulu, HI 96809

SUBJECT: EIS PREPARATION NOTICE FOR PROPOSED CONDOMINIUM
PROJECT AT KAPALUA
TAX: 7-1-0115, 6 & 11
PUUHANAHU, NORTH KONA, HAWAII

Thank you for the opportunity to comment on the subject matter. The access should be discussed in the EIS. The physical dimensions, type of pavement, location, etc. should be addressed. There are several other lots along the shore. Will the road provide access to these lots and to the properties which it will run through?

The State Highways Division should be consulted on the intersection design at the Queen Kaahumanu Highway.

Edward Harada
EDWARD HARADA
Chief Engineer

51

ENVIRONMENTAL
COMMUNICATIONS
INC.

March 23, 1981

Mr. Edward Harada, Chief Engineer
Department of Public Works,
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Harada,

SUBJECT: EIS PREPARATION NOTICE FOR THE PROPOSED
KAPALUA CONDOMINIUM PROJECT

Thank you for your letter of March 20, 1981, regarding the abovementioned EIS Preparation Notice. Your concerns of the proposed location of the roadway, its physical dimensions, the type of pavement, and the disposition of access to other lots will be addressed in the EIS we are now in the process of preparing. We also note that the State Highways Division will be consulted on the intersection design at Queen Kaahumanu Highway.

We appreciate your prompt response and concern in this matter.

Very truly yours,
F. J. Rodriguez
F. J. Rodriguez

cc: Planning Department, County of Hawaii
Environmental Quality Commission
Mr. Arnold Abe
Sam O. Hirota, Inc.

FIR:CHT:pl

MAR 23 1981

1157 BISHOP BUILDING SUITE 100 • P.O. BOX 104 • HONOLULU HAWAII 96801 • TELEPHONE 521-4361

DEPARTMENT OF PLANNING
AND ECONOMIC DEVELOPMENT



April 11, 1981

Ref. No. 2973

Mr. F.J. Rodriguez
Environmental Communications, Inc.

P.O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

SUBJECT: EIS Preparation Notice for the Proposed Condominium
Project at Kapalaea, North Kona, Hawaii

52

Thank you for your letter of March 11, 1981, informing us of your intent to prepare an Environmental Impact Statement for the proposed condominium project at Kapalaea, Hawaii.

We would like to offer the following comments with respect to relevant objectives and policies of the Hawaii Coastal Zone Management Program.

RECREATIONAL RESOURCES

Provide and manage adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value.

The EIS should detail current recreational uses of the project site. The presence of a jeep trail indicates possible recreational fishing use, for example. The private roadway described and the "guardhouse to screen vehicles entering the development" implies that no public access to the shore will be provided for recreational purposes.

We note that general plan amendment, land use, and zoning changes are required. Coordination with the Department of Land and Natural Resources in its responsibilities to exercise control over the State's conservation districts should be described in the EIS.

Plans to comply with the Hawaii County General Plan Ordinance 439 relating to public access should be detailed.

HISTORIC RESOURCES

The preparation notice contains a comprehensive assessment of information needs with respect to the site's rich archaeological resources.

APR 14 1981

Mr. F.J. Rodriguez
Page 2
April 9, 1981

Information needs listed relevant to the CZM program objective to "protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the CZM area that are significant in Hawaiian and American history" should be included in EIS. The EIS should also detail plans to comply with the CZM policy to maximize information retention through the preservation of remains and artifacts or salvage operations.

SCENIC AND OPEN SPACE RESOURCES

The EIS should discuss planned mitigative measures to reduce apparent conflicts with the Hawaii State Plan, County General Plan, and Land Use Commission policies and laws restricting most housing, industrial, and resort development to limited urban districts with existing infrastructures. There is also an apparent inconsistency with the CZM objective to "protect, preserve, and where desirable, restore or improve the quality of coastal, scenic, and open space resources." This should be addressed. There should be a full discussion of the implications of upzoning this area for the overall direction and location of urban and resort uses.

COASTAL ECOSYSTEMS

The impacts on the anachialine ponds and related fauna should be coordinated with the regulations of the U.S. Army Corps of Engineers governing inland salt water pools. The desalinization process and its environmental impacts should be fully detailed. The preparation notice adequately states the EIS information needs relative to the groundwater resource. The salt and brackish water ecosystems should be detailed, both inland and oceanic. The notice states that construction materials may include on-site lava rock. This and other physical alteration of the site should be fully analyzed in light of the CZM policy to preserve and protect valuable coastal ecosystems.

COASTAL HAZARDS

The notice states that the area is subject to tsunami inundation and burial by lava flows. Proposed mitigative measures should be detailed. The Army Corps of Engineers should be consulted.

In addition, we note that the subject condominium project is the subject of a pending petition for a land use boundary amendment before the State Land Use Commission. A district reclassification from the Conservation to the Urban District is required in order for the project to proceed. We, therefore, feel that the EIS should address the following:

- Describe the proximity to the proposed project with respect to existing urban activities and developments, particularly residential communities and centers of trade and employment.
- Describe the potential affect the proposed development may have upon the future urban growth of surrounding lands.

Mr. F.J. Rodriguez
Page 3
April 9, 1981

P-1 REPRO-2
PRESIDENT

- Describe the proximity of the project with respect to available public services and facilities, including an assessment of the existing capacity or service levels of the following services or facilities: police and fire protection, medical facilities, schools, municipal water and sewage systems, solid waste disposal, electric and telephone lines.

- Discuss the need for the proposed development at this time in view of the large amount of vacant urban district lands already existing in the North Kona and South Kohala regions.

Finally, as the proposed project includes a substantial number of what could be considered vacation units, we believe the applicant should also review the objectives, policies and recommendations of the Draft State Tourism Plan and Technical Reference Document. A number of other functional plans also relate to this project.

Thank you for the opportunity to comment on this matter.

Sincerely,



Hideto Kono

ENVIRONMENTAL
COMMUNICATIONS
INC.

April 28, 1981

Mr. Hideto Kono, Director
Department of Planning and Economic
Development, State of Hawaii
P. O. Box 2339
Honolulu, Hawaii 96804

Dear Mr. Kono:

Subject: EIS PREPARATION NOTICE FOR PROPOSED KAPALAOA CONDOMINIUM,
NORTH KONA, HAWAII

We have received and reviewed your letter of April 9, 1981, relating to the abovementioned EIS Preparation Notice. Below, on an item by item basis, we have responded to your concerns. Many of the subjects brought up in your comments will be discussed in the Draft EIS.

Comment:

RECREATIONAL RESOURCES

Provide and manage adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value.

Response:

The need for public access will be worked out with the Department of Parks and Recreation, County of Hawaii and the Department of Land and Natural Resources. Public right-of-way and/or access will be provided. The Draft EIS will detail this information as much as possible at this point in the planning of the project.

Comment:

The EIS should detail current recreational uses of the project site. The presence of a jeep trail indicates possible recreational fishing use, for example. The private roadway described and the "guardhouse to screen vehicles entering the development" implies that no public access to the shore will be provided for recreational purposes.

Response:

The current recreational uses of the project are primarily for fishing and camping. The frequency and the number of recreational participants are unknown. However, given the location of the site and inaccessibility to the average automobile, it is felt that only a dozen or so fishermen utilize the site on a regular basis.

1112 Space Bounded, Suite 407, P.O. Box 38 • WOHOOLU HAWAII 96740 • TELEPHONE 983-3241

Comment:

We note that General Plan amendment, land use, and zoning changes are required. Coordination with the Department of Land and Natural Resources in its responsibilities to exercise control over the State's conservation districts should be described in the EIS.

Response:

The Department of Land and Natural Resources is one of the reviewing agencies for the EIS process. We have already received a copy of their comments on the EIS Preparation Notice. Coordination with the Department of Land and Natural Resources will continue.

Comment:

Plans to comply with the Hawaii County General Plan Ordinance 439 relating to public access should be detailed.

Response:

This project's compliance with Ordinance 439 will be addressed.

Comment:

The preparation notice contains a comprehensive assessment of information needs with respect to the site's rich archaeological resources. Information needs listed relevant to the CZM program objective to "protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the CZM area that are significant in Hawaiian and American history" should be included in EIS. The EIS should also detail plans to comply with the CZM policy to maximize information retention through the preservation of remains and artifacts or salvage operations.

Response:

This will be included in the Draft EIS. We note that the archaeological consultant has identified recommended actions which should be undertaken by the developer. The Draft EIS will identify which of these actions will be implemented.

Comment:

SCENIC AND OPEN SPACE RESOURCES

The EIS should discuss planned mitigative measures to reduce apparent conflicts with the Hawaii State Plan, County General Plan, and Land Use Commission policies and lava restricting most housing, industrial, and resort development to limited urban districts with existing infrastructures. There is also an apparent inconsistency with the CZM objective to "protect, preserve, and where desirable, restore or improve the quality of coastal, scenic, and open space resources." This should be addressed. There should be a full discussion of the implications of upzoning this area for the overall direction and location of urban and resort uses.

Response:

Discussion on the rationale on the use of the property will be included in the Draft EIS. Recently, a planning analysis was prepared for the proposed project. This analysis will be included in the Draft EIS document.

The scenic and open space resources will also be addressed in the Draft EIS.

Comment:

COASTAL ECOSYSTEMS

The impacts on the anchialine ponds and related fauna should be coordinated with the regulations of the U.S. Army Corps of Engineers governing inland salt water pools. The desalination process and its environmental impacts should be fully detailed. The preparation notice adequately states the EIS information needs relative to the groundwater resource. The salt and brackish water ecosystems should be detailed, both inland and oceanic. The notice states that construction materials may include onsite lava rock. This and other physical alteration of the site should be fully analyzed in light of the CZM policy to preserve and protect valuable coastal ecosystems.

Response:

The anchialine ponds will not be altered. Subsequently, impact on the ponds is expected to be minimal. The desalination process will be detailed in the Draft EIS. On-site use of lava rock is not expected to be significant. Considering the abundance of lava rock in this and the surrounding area, it would appear that such use of this material would cause negligible impact over the enhancement of the aesthetics of the structures.

Mr. Hideeto Kono
April 28, 1981
Page 5

Comment:

COASTAL HAZARDS:

The notice states that the area is subject to tsunami inundation and burial by lava flows. Proposed mitigation measures should be detailed. The Army Corps of Engineers should be consulted.

Response:

Mitigative measures for inundation from tsunamis will be addressed in the Draft EIS.

Comment:

- Describe the proximity to the proposed project with respect to existing urban activities and developments, particularly residential communities and centers of trade and employment.

Response:

This was reviewed in the land use analysis. The analysis will be included in the Draft EIS.

Comment:

- Describe the potential affect the proposed development may have upon the future urban growth of surrounding lands.

Response:

This was reviewed in the land use analysis. As indicated above, the analysis will be included in the Draft EIS.

Comment:

- Describe the proximity of the project with respect to available public services and facilities, including an assessment of the existing capacity or service levels of the following services or facilities: Police and fire protection, medical facilities, schools, municipal water and sewage systems, solid waste disposal, electric and telephone lines.

Response:

Most of these services are not in the immediate vicinity of the project site. The Draft EIS will provide information relating to those normal facilities and services and will, wherever possible, identify the project's impact on these services/facilities.

Comment:

- Discuss the need for the proposed development at this time in view of the large amount of vacant urban district lands already existing in the North Kona and South Kohala regions.

Response:

This was addressed in the land use analysis which will be included in the Draft EIS.

Comment:

Finally, as the proposed project includes a substantial number of what could be considered vacation units, we believe the applicant should also review the objectives, policies and recommendations of the Draft State Tourism Plan and Technical Reference Document. A number of other functional plans also relate to this project.

Response:

The Draft State Tourism Plan does not address the "retreat resort type" development. The Plan deals primarily with larger resort areas (existing and proposed). Subsequently, the review of the Tourism Plan is not felt to be appropriate. However, further analysis of the project to the Tourism Plan will be considered for incorporation into the Draft EIS document.

Thank you for your comments, we appreciate your thorough review and concern on this EIS Preparation Notice.

Very truly yours,
F. J. Rodriguez

F. J. Rodriguez

cc: Environmental Quality Commission
Department of Land Utilization
Mr. Arnold Abe, Esq.
Mr. Denis T. Shiu

FIR:CKT:pl

KENDRA A. ANDREW
Executive Secretary



SUSUMU ONO, Chairman
Board of Land and Natural Resources

ETIENNE A. MATAEWA
Secretary to the Chairman

DEPARTMENT OF LAND AND
NATURAL RESOURCES
Administrator's Headquarters
Committee on
Fish and Game
Forestry
Land Management
State Parks
Water and Land Development

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

P.O. Box 536
Honolulu, Hawaii 96809

April 10, 1981

Mr. F. J. Rodriguez
Environmental Communications, Inc.
1152 Bishop Building, Suite 508
P.O. Box 536
Honolulu, Hawaii 96809

56

We have reviewed the Environmental Impact Statement (EIS) Preparation Notice for the proposed condominium apartment building at Kapalaoa.

The forthcoming EIS should address the following concerns:

1. The project is in a Coastal High Hazard Area.
2. Potable water shall conform to County and State standards.
3. Waste disposal shall conform to County and State standards.
4. Grading and landscaping plans shall avoid and prevent beach erosion and sedimentation.
5. Avoidance or mitigation of impacts on anchialine ponds.

A review has been made of the Environmental Assessment by Kapalaoa, Inc. (May 1980), and the Cultural Resources Survey at Kapalaoa, North Kona, Hawaii (February 1980). These reports indicate a high number of structural sites and petroglyphs at Kapalaoa. We concur with the archaeologist's recommendation to carry out archaeological excavations on the structural sites and preserve the petroglyphs. This recommendation corresponds with the plans in the Environmental Assessment to implement the archaeologist's recommendations.

We recommend that the EIS incorporate these proposed archaeological actions and determine the mitigation measures to be undertaken by the developer.

APR 14 1981

Sincerely,

SUSUMU ONO, Chairman
Board of Land and Natural Resources
and
State Historic Preservation Officer

The report of this further archaeological work should be submitted to our historic sites office for review and evaluation. From this date, we will be able to determine if mitigation measures are met prior to the proposed construction.

ENVIRONMENTAL
COMMUNICATIONS
INC.

F. J. Rodriguez
F. J. Rodriguez

April 15, 1981

Mr. Susumu Ono, Chairman
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Ono:

Subject: Environmental Impact Statement (EIS) Preparation
Notice for Proposed Kapalaao Condominium

We have received and reviewed your letter of April 10, 1981, regarding the abovesentioned Draft EIS. Items 1 through 5, quoted below, will be addressed in the Draft EIS which is presently being prepared.

- "1) The project is in a Coastal High Hazard Area.
- 2) Potable water shall conform to County and State standards.
- 3) Waste disposal shall conform to County and State standards.
- 4) Grading and landscaping plans shall avoid and prevent beach erosion and sedimentation.
- 5) Avoidance or mitigation of impacts on anchialine ponds."

The Draft EIS being prepared will also address the additional archaeological actions and mitigation measures that will be incorporated into the plan. We will advise the Historic Site Office of any additional archaeological work which will be undertaken. Written archaeological reports will, upon completion, be submitted to that Office for their information and review.

Thank you for your concern on these matters.

Very truly yours,

F. J. Rodriguez
F. J. Rodriguez

cc: Environmental Quality Commission
Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.
Sam O. Hirota, Inc.

F. J. Rodriguez

1112 Bishop Building Suite 407, P.O. Box 38 • Honolulu Hawaii 96801 • Telephone 531-4201

MAUNA LANI RESORT, INC.
110 Bishop Kaiulani, Honolulu, Hawaii 96813 • Telephone (408) 526-2603

f. J. Rodriguez
President

ENVIRONMENTAL
COMMUNICATIONS
INC.

March 16, 1981

Mr. Arnold T. Abe
ABE AND ABE
190 S. King Street, Suite 2634
Honolulu, Hawaii 96813

Dear Mr. Abe:

I understand that an environmental impact statement is now being prepared for a 120-unit condominium development at Puuanahulu. Please put my name on your mailing list for any information that you may be releasing on this project. I would also like a copy of the EIS when it is released.

Thank you.

Very truly yours,

Francine Kurokawa Duncan
Francine Kurokawa Duncan
Director of Public Affairs

March 20, 1981

Ms. Francine Kurokawa Duncan
Director of Public Affairs,
Mauna Lani Resort, Inc.
P.O. Box 4959
Kawainae, Hawaii 96743

Dear Ms. Duncan,

SUBJECT: EIS Preparation Notice for the Proposed 120-Unit
Condominium at Kapalaea, Puuanahulu North Kona

We have received your request of March 16, 1981 to be a consulting party for the abovementioned EIS Preparation Notice. The Notice is enclosed for your review and comments. Your written response on the Notice or the project is requested 30 days from this date, or before April 20, 1981. As required, each written letter having substantial comments is included in the EIS document; additionally, a written response will be sent back to you.

Your name will be retained on the Draft EIS mailing list as a consulting party even if no response is received on the EIS Preparation Notice. We anticipate that the Draft EIS will be distributed in May or June of this year.

Your interest in this matter is appreciated.

F.J. Rodriguez
F.J. Rodriguez

Enclosure

cc: Mr. Arnold Abe, Esq.
Planning Department, County of Hawaii
Environmental Quality Commission

F J RODRIGUEZ
ENVIRONMENTAL
COMMUNICATIONS
INC.

F J Rodriguez
President

April 9, 1981

F J Rodriguez
FJR:CKT:p1

The Honorable Virginia Isbell
State Representative
State Capitol, Room 322
Honolulu, Hawaii 96813
Dear Representative Isbell,

Subject: EIS Preparation Notice for the Proposed 120-Unit
Condominium at Kapaiau, Puuanahulu, North Kona

59

As per your request, enclosed for your information is a copy of the
above-mentioned EIS Preparation Notice. When the Draft
EIS is available, we will send you a copy.
Your interest in this matter is appreciated.

F. J. Rodriguez
F. J. Rodriguez

Very truly yours,
F. J. Rodriguez
F. J. Rodriguez

Enclosure
cc: Mr. Arnold Abe
FJR:CKT:p1

Enclosure
cc: Mr. Arnold Abe
FJR:CKT:p1

1137 BISHOP BLDG, SUITE 407, P.O. BOX 134 • HONOLULU HAWAII 96814 • TELEPHONE (808) 521-4301

1137 BISHOP BLDG, SUITE 407, P.O. BOX 134 • HONOLULU HAWAII 96814 • TELEPHONE (808) 521-4301

12. REPRODUCTION OF COMMENTS AND RESPONSES MADE DURING THE CONSULTATION PROCESS

Pages 61 to 99 contain reduced size copies of the comments and responses to the comments during the EIS Consultation Period. Where a substantial comment was received, the written response immediately follows the letter. The comments/reponses are provided in the following order:

<u>Agency/Organization</u>	<u>Date Comment Received</u>	<u>Date of Response</u>	<u>Copy of Comment on Page</u>
<u>County of Hawaii</u>			
Department of Water Supply	6/01/81	—	62
Department of Parks & Recreation	6/04/81	8/05/81	66
Planning Department	6/22/81	8/05/81	74
Inclosure: Department of Health	3/31/81	—	99
<u>State</u>			
Department of Defense	5/28/81	—	61
Department of Accounting & General Services	5/29/81	—	62
Department of Agriculture	6/02/81	—	63
Department of Land & Natural Resources	6/19/81	8/05/81	68
Department of Social Services and Housing	6/26/81	8/05/81	70
Department of Planning and Economic Development	6/24/81	8/05/81	79
Water Resources Research Center, UH at Manoa	6/23/81	8/05/81	83
Office of Environmental Quality Control	6/23/81	8/05/81	84
Environmental Center, University of Hawaii at Manoa	6/23/81	8/05/81	92
Department of Health	6/25/81	8/05/81	96
Inclosure: Department of Health	—	—	98
<u>Federal</u>			
Department of the Army, Engineering/Housing	5/28/81	—	61
U.S. Navy, Facilities Engineers	6/03/81	—	63
U.S. Department of Agriculture, Soil Conservation Service	6/22/81	—	64
Department of the Air Force	6/30/81	—	64
Department of the Army, Corps of Engineers	6/16/81	6/16/81	67
U.S. Department of the Interior, Fish and Wildlife Service	6/19/81	8/05/81	72
<u>Other</u>			
Hawaii Electric Light Co., Inc.	6/01/81	6/03/81	65
Na Ala Hele	6/23/81	8/05/81	90



George H. Arakawa
Secretary

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
2425 Diamond Head Road, Honolulu, Hawaii 96803

HYENG

Valentine A. Safferman
Administrator
Admiralty Division
Environmental Protection
Division
BUREAU OF NAVIGATION
COMINT
MILITARY BASES

86 MAY 1981

27 MAY 1981

AP77-217-F

Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Gentlemen:

Kapalaoa Condominium Project

Thank you for providing us the opportunity to review your proposed project.

Kapalaoa Condominium Project-Draft Environmental Impact Statement.

We have completed our review and have no comments to offer at this time.

Yours truly,

Jerry M. Matsuda

JERRY M. MATSUDA
Captain, HANG
Contr. & Engr Officer

cc:
Kapalaoa, Inc.
Env Quality Commission w/enclosure

Certification:
The Environmental Impact Statement for the Proposed Kapalaoa Condominium
Development, Kapalaoa, Punaehoa, North Kona, Hawaii has been reviewed and we
have no comments to offer. There are no Army installations or activities in
the vicinity of the proposed project.

Sincerely,

Original signed by

ADOLPH A. WIGST
COL, EN
Director of Engineering and Materiel

Copy furnished:
Kanahana, Inc.
c/o Environmental Communications, Inc.
P.O. Box 530
Honolulu, Hawaii 96803

NO RESPONSE REQUIRED

NO RESPONSE REQUIRED

MAY 28 1981

MAY 28 1981

COPY

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
25 AUPUHI STREET • HILO, HAWAII 96720



MAY 28 1981
(P)1448.1

MAY 28 1981

Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Gentlemen:

Subject: Environmental Impact Statement for
the Kapalaoa Condominium Project

Thank you for this opportunity to review and comment on
the subject project.

The project will not have any adverse environmental effect
on any existing or planned facilities serviced by our department.

Very truly yours,

MI:jl
cc: Kapalaoa, Inc.
RIKIO NISHIOKA
State Public Works Engineer

To: Planning Department

Re: Environmental Impact Statement

Subject: KAPALAOA CONDOMINIUM PROJECT
ENVIRONMENTAL IMPACT STATEMENT
TAX ID # 7-1-03:05, 06 AND 11

We have no objections to the Environmental Impact Statement for the subject project.

As previously stated, the Department has no water system in the area.

H. William Sasaki
Manager

QA

cc - Kapalaoa, Inc., c/o Environmental Commissions, Inc.

NO RESPONSE REQUIRED

MAY 29 1981

... Water brings progress...
JUN - 1 1981

NO RESPONSE REQUIRED



William H. Aila, Jr.
Chairman

John F. Pihl, Jr.
Executive Director
Board of Agriculture
State of Hawaii

STATE OF HAWAII
DEPARTMENT OF AGRICULTURE

1100 S. KÄOKE STREET
Honolulu, Hawaii 96814

May 29, 1981

MEMORANDUM

To: Mr. Sidney Fukte, Director
Planning Department
County of Hawaii

Subject: Draft Environmental Impact Statement
Kapalua Condominium Development
THK: 7-1-03; 6-6, and 11 N. Kona, Maui 11

The Department of Agriculture has no comments to offer concerning
the subject Environmental Impact Statement, inasmuch as no impact
on agricultural lands or activities is foreseen.
We appreciate the opportunity to comment.

John F. Pihl, Jr.
Chairman
Board of Agriculture
cc: Kapalua, Inc.

NO RESPONSE REQUIRED

HEADQUARTERS
NAVAL BASE PEARL HARBOR
BOX 118
PEARL HARBOR, HAWAII 96840

RECEIVED
MAIL ROOM
PEARL HARBOR, HAWAII 96840
00201 AM
SER 960

: 1 JUN 1981

Planning Department
County of Hawaii
25 Alupuni Street
Hilo, Hawaii 96720

Gentlemen:

Draft Environmental Impact Statement
Kapalua Condominium Project

The draft Environmental Impact Statement for the proposed Kapalua
Condominium Development has been reviewed and the Navy has no comments to
offer.

By copy of this letter, the EIS is being returned to the State
Environmental Quality Commission.

Thank you for the opportunity to review the subject EIS.

Sincerely,

R. D. EBER
CAPTAIN, CEC, U.S. NAVY
FACILITIES ENGINEER
BY DIRECTION OF THE COMMANDER
Kapalua, Inc.
c/o Environmental Communications, Inc.
P. O. Box 536
Honolulu, HI 96809
State EQC (w/EIS)

NO RESPONSE REQUIRED

JUN - 2 1981

JUN - 3 1981



United States
Department of
Agriculture

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 15TH AIR BASE WING (PACAF)
MICKIM AIR FORCE BASE, HAWAII 96833



June 19, 1981

Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Gentlemen:

Subject: Draft Environmental Impact Statement for the Proposed
Kapalaoa Condominium Development, North Kona, Hawaii

We have reviewed the subject statement and have no comments to make.

Thank you for the opportunity to review this document.

Sincerely,

JACK P. KANALZ

State Conservationist

Enclosure: EIS returned

cc:
Kapalaoa, Inc.
c/o Environmental Communications, Inc.
P.O. Box 536
Honolulu, HI 96809

/
NO RESPONSE REQUIRED

100-Sub-Communications Service
The Army's Sub-Service
for Research and Development

RECEIVED
JUN 22 1981
SCS AS
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JUN 30 1981

HAWAII ELECTRIC LIGHT COMPANY, INC.
P. O. BOX 1027 HILo, HAWAII - 96720
May 28, 1981



H=M/K

Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Attention: Mr. Sidney Fuke, Director

Gentlemen:

SUBJECT: Kapalaoa Condominium Project
Kapalaoa, Puuanahulu, No. Kona, Hawaii

We have reviewed the Environmental Impact Statement prepared for the subject project and we offer the following comments:

- 1) A 12.47KV distribution line to the Kapalaoa Condominium Project taken from the existing 12.47KV distribution system feeding the Anaeoomalu Resort Project is not possible without upgrading the existing distribution system. The construction cost of the present 12.47KV distribution system serving the Anaeoomalu Resort Project was paid for by the developers of that project. The system was designed to service only the Anaeoomalu Resort Project. In order to take service from this system, the developers of the Kapalaoa Condominium Project must pay the construction cost of removing the existing conductors and installing larger conductors from the substation to the take-off point.
- 2) Construction of an overhead or underground distribution system on the Nakai side of Queen Kahumanu Hwy. will be subject to easements.
- 3) Another alternate route to providing electrical service to the Kapalaoa Condominium Project would be the construction of an underground distribution system on Queen Kahumanu Hwy. from Anaeoomalu Substation to the proposed condominium site.

If there are further questions, please contact our Customer Engineering Division.

Very truly yours,

Alva K. Nakamura, Manager
Engineering Department

AKH:D:T:ng
xc: EKH
HSY
Kapalaoa, Inc.

ENVIRONMENTAL
COMMUNICATIONS
INC.

F. J. RODRIGUEZ
PRESIDENT

June 3, 1981

Hawai'i Electric Light Company, Inc.
Engineering Department
P. O. Box 1027
Hilo, Hawaii 96720

Attention: Alva K. Nakamura, Manager

Gentlemen:

Subject: Draft Environmental Impact Statement for the Proposed
Kapalaoa Condominium Project

We have received and reviewed your response of May 28, 1981 on the above mentioned Draft EIS. In reply to your comments, the following information is provided:

- (1) The developer's engineering consultant will evaluate the cost of extending the distribution system from Anaeoomalu Resort versus the construction of an underground distribution system along Queen Kahumanu Highway from Anaeoomalu Substation to the proposed site (described by your item 3). Depending on the costs and the difficulties encountered, the developer will decide the alternative to be implemented. The engineering consultant will then work with your staff to prepare the necessary details for HELCO's approval.
- (2) This will be acknowledged in the Final EIS.
- (3) This alternate route will be identified in the Final EIS.

Thank you for your comments. We appreciate your concern on these matters.

Very truly yours,

F. J. Rodriguez

cc: Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.

FJR:CNT:pl

JUN - 1 1981

112, FRIENDSHIP BUILDING, SUITE 407, P.O. BOX 324 • HONOLULU HAWAII 96814 • TELEPHONE 522-1200

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
PT CHAPTER HAWAII 96858



PGEN-PV

15 June 1981

Director, Planning Department
County of Hawaii
25 Auipuni Street
Honolulu, Hawaii 96820

Dear Sir:

Thank you for providing the Draft Environmental Impact Statement (DEIS) for the Kapalaoa Condominium Project, Kapalaoa, Puuanahulu, North Kona, Hawaii. We have reviewed the material submitted and we provide the following comments to assist you with preparation of the Final EIS.

- a. Based on information provided in the DEIS, a Department of the Army permit is not required for the project.
- b. Reference pp. 11-13 of DEIS text: Based on the best available tsunami and flood hazard data obtained from the Flood Insurance Study (FIS) for the island of Hawaii, prepared by the Federal Insurance Administration, the project site (inclosure 1) is subject to tsunami inundation (Zones V1 and A4) where the approximate 100-year tsunami elevation is 7-8 feet above mean sea level. Refer to Inclosure 2, Flood Insurance Rate Map from the FIS, showing the coastal flood plain along the northwest Hawaii coastline. The 100-year event has a one percent chance of being equalled or exceeded in any given year.

Sincerely,

KISUK CHEUNG
Chief, Engineering Division

2 Incl
As stated

Copy Furn (wo incl):
Kapalaoa, Inc.
c/o Environmental Communications, Inc.
P.O. Box 536
Honolulu, Hawaii 96809

cc: Planning Department, County of Hawaii
Department of Land Utilization
Mr. Arnold Abe, Esq.

FJR:CKT:p!

JUN 16 1981

ENVIRONMENTAL
COMMUNICATIONS
INC.

F. J. Rodriguez
President

June 16, 1981

Mr. Kisuk Cheung
Chief, Engineering Division
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawaii 96858

Dear Mr. Cheung:

Subject: Draft Environmental Impact Statement (DEIS)
for Proposed Kapalaoa Condominium Project,
Kapalaoa, Puuanahulu, North Kona, Hawaii

We have received and reviewed your letter of June 15, 1981, on the abovementioned Draft EIS. In regards to your comment on the tsunami inundation, we find that we have utilized a higher tsunami runup (12 feet) versus the Federal Insurance Administration's Zones V1 and A4 (7-8 feet). Subsequently, the "flood-proofing" measure (i.e. the building of the units on building pads approximately 13 feet above sea level) should adequately resolve the problem of tsunami damage. In addition, we will include the data provided in your letter on tsunami and flood hazard.

Thank you for your comments.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

1162 Bishop Building, Suite 607, P.O. Box 134 • HONOLULU HAWAII 96809 • TELEPHONE 423-4301

GILDA R. ANDREW
Division of Land



NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
Division of Land & Natural Resources

Planning Department -2- June 15, 1981

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P.O. Box 321
Honolulu, Hawaii 96808

June 15, 1981
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Gentlemen:

We have reviewed the EIS for the Kapalaaoa condominium
and have comments to offer.

The description of the affected environment should include
a site map showing existing roadways to the site.

Part of the project proposal is to drill a well on State
lands leased to Mr. P. Newell Bennett (Hawaii TMK 7-1-03:14).
This well is to feed brackish water to a desalting plant. The
water is to be used for drinking (50,000 gallons per day) and
irrigation (250,000 gallons per day). Use is estimated to be
one-third of natural replenishment.

The withdrawal of one-third of the groundwater flow will
have impact on the salinity of water in the anchialine ponds
and consequently, on aquatic species inhabiting these ponds.
We, therefore, suggest that this matter be investigated and
addressed in the final EIS.

We also suggest that the water system be built in accordance
with Department of Health standards. The project description
ought to reflect whether it will or not.

The EIS shows that archaeological and historic resources
will be destroyed or disturbed (page 33) by the proposed
development. Following the consulting archaeologist's
recommendations, the developer will implement mitigating actions
prior to construction.

JUN 19 1981

As an additional mitigation action, we recommend that
the developer undertake detailed mapping (plane table and
transit) of the entire area, which would reflect the contextual
relationship of all archaeological features. The action can be
accomplished during the salvage phase and be included in the
final salvage report.

The final salvage report should be submitted to our
historic sites office for review and evaluation. From this
data, we will be able to determine if mitigation measures
are met prior to commencement of construction.

Very truly yours,

Susumu Ono

SUSUMU ONO
Chairman,
Board of Land & Natural Resources
& State Historic Preservation Officer

ENVIRONMENTAL
COMMUNICATIONS
INC.

Mr. Susumu Ono, Chairman
Department of Land and Natural Resources
August 5, 1981
Page 2

August 5, 1981

Mr. Susumu Ono, Chairman
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Ono:
Subject: Environmental Impact Statement (EIS) for Kapalaoa
Condominium Project, Puuanahulu, North Kona, Hawaii

Thank you for your letter of June 15, 1981 on the EIS for the
Kapalaoa Condominium Project, Puuanahulu, North Kona, Hawaii. We
have reviewed your concerns and would like to provide the following
responses to your comments.

Comment: "The description of the affected environment should include
a site map showing existing roadways to the site."

Response: There are no existing paved roadways leading to the project
site.

Comment: "Part of the project proposal is to drill a well on State lands
leased to Mr. F. Newell Bohnett (Hawaii TMK 7-1-03:14). This well is to
feed brackish water to a desalting plant. The water is to be used for
drinking (50,000 gallons per day) and irrigation (250,000 gallons per day).
Use is estimated to be one-third of natural replenishment."

Response: The developer knows that the land for the well is leased to
Mr. Bohnett; at the appropriate time, the developer will proceed to
process the request for use of these lands with Mr. Bohnett and the
State.

Comment: "The withdrawal of one-third of the groundwater flow will have
impact on the salinity of water in the anachaline ponds and consequently,
on aquatic species inhabiting these ponds. We, therefore, suggest that
this matter be investigated and addressed in the final EIS."

Response: The groundwater withdrawal is anticipated to be less than
one third of the groundwater flow (page 29); therefore, the effect on
salinity in the anachaline ponds is expected to be minimal. It is noted
that the aquatic species inhabiting the ponds have the ability to sur-
vive changes in salinity, so the groundwater withdrawal should not
adversely affect the ponds.

cc: Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.

69

Comment: "We also suggest that the water system be built in accordance
with Department of Health standards. The project description ought to
reflect whether it will or not."

Response: The water system will be built and operated in accordance
to the Department of Health standards and other applicable laws and
regulations.

Comment: "The EIS shows that archaeological and historic resources
will be destroyed or disturbed (page 33) by the proposed development.
Following the consulting archaeologist's recommendations, the developer
will implement mitigating actions prior to construction."

Response: This is correct.

Comment: "As an additional mitigation action, we recommend that the
developer undertake detailed mapping (plane table and transit) of the
entire area, which would reflect the contextual relationship of all
archaeologic features. The action can be accomplished during the salvage
phase and be included in the final salvage report."

Response: Prior to doing detailed archaeological work, the developer
has determined that initial land use approvals must be obtained.
Subsequently, the developer will continue detailed archaeological work
only upon the approval of the initial land use change requests.
Detailed mapping and other archaeological requirements imposed by your
department will be prepared and provided to the Historic Sites Section.

Comment: "The final salvage report should be submitted to our historic
sites office for review and evaluation. From this data, we will be able to
determine if mitigation measures are met prior to commencement of
construction."

Response: As indicated above, the requirements for continued archaeo-
logical work will be met at the appropriate time.

We appreciate your concerns in this matter.

Very truly yours,
F. J. Rodriguez

F. J. Rodriguez

GEORGE A. ANDREW
GOVERNOR



Franklin Y. K. Sun
Director of Social Services

STATE OF HAWAII
DEPARTMENT OF SOCIAL SERVICES AND HOUSING
P.O. Box 339, Honolulu, Hawaii 96809
June 16, 1981

developers may consider lessening the visual effects
of the development by providing additional screening
landscaping between the beachfront areas and the
building structures.

Thank you for allowing us the opportunity to comment on this
matter.

Sincerely,

Franklin Y. K. Sun
FRANKLIN Y. K. SUN
Director

HHA:BIK:JJS:ck
cc: vKapalua, Inc.

Planning Department
County of Hawaii
25 Alapuni Street
Hilo, Hawaii 96720

Gentlemen:

Subject: Draft EIS for the Proposed Kapalua
Condominium Development

We have reviewed the Draft Environmental Impact Statement and
find that the proposed project will not adversely affect any
of our programs or projects.

However, we offer the following comments for your consideration:

1. This proposed luxury type project does nothing to
address the current housing problem for the low and
moderate income families in the Kona district since
the intent is to market these high-priced units
primarily to Canadians and non-residents of the state.
2. The report indicates that beaches will be accessible
to the public; whereas, the site plan indicates that
access to non-property owners can only be made without
restriction from adjoining properties, and not from the
site itself. The design essentially gives the impres-
sion of having exclusively a private beach and will
exclude island-resident users. A suggested mitigative
measure would be to provide a beach pathway directly
from a designated visitor parking area.
3. Request the State and County plans specify this coast-
line as a site for a continuous park system, the

ENVIRONMENTAL
COMMUNICATIONS
INC.
F. J. RODRIGUEZ
PRESIDENT

August 5, 1981

Mr. Franklin Y. K. Sunn, Director
Department of Social Services and Housing
August 5, 1981
Page 2

Mr. Franklin Y. K. Sunn, Director
Department of Social Services and Housing
State of Hawaii
1330 Miller Street
Honolulu, Hawaii 96813

Dear Mr. Sunn:

Subject: Draft Environmental Impact Statement (EIS) for the Proposed
Kapalaoa Condominium Project, North Kona, Hawaii

Thank you for your letter of June 16, 1981 on the EIS for the Kapalaoa Condominium Project, located in Puuanahulu, North Kona District, Island of Hawaii. We have reviewed your concerns with the engineering consultant and would like to provide the following response to your comments.

Comment:

*1. This proposed luxury type project does nothing to address the current housing problem for the low and moderate income families in the Kona district since the intent is to market these high-priced units primarily to Canadians and non-residents of the State."

Response: This is a correct statement; however, it should be realized that housing should meet the needs of various people. While this housing will be for upper-middle and upper income families, their contribution to the economy (e.g., local expenditures, employment) should not be overlooked.

Comment:

*2. The report indicates that beaches will be accessible to the public; whereas, the site plan indicates that access to non-property owners can only be made without restraint from adjoining properties, and not from the site itself. The design essentially gives the impression of having exclusively a private beach and will exclude island-resident users. A suggested mitigative measure would be to provide a beach pathway directly from a designated visitor parking area.

Response: Access to the shoreline area would logically be from the State owned parcel located on the side of the project site. Access through the property itself will be coordinated with the County's Department of Parks and Recreation.

Comment:

*3. Because the State and County plans specify this coastline as a site for a continuous park system, the developers may consider lessening the visual effects of the development by providing additional screening landscaping between the beachfront areas and the building structures."

Response: Landscaping in this area will be provided.

We appreciate your concerns in this matter.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.

FJRKCR:pl



United States Department of the Interior

FISH AND WILDLIFE SERVICE
100 ALA WAIWAIA BOULEVARD
P O BOX 50157
HONOLULU, HAWAII 96810

Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

JUL 17 1981

Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Re: DEIS-Kapaloa
Condominium Development
North Kona, Hawaii

We have reviewed the subject Environmental Impact Statement (EIS) and offer the following comments.

The DEIS does not adequately describe the wildlife resources in the project area. It does not address the marine resources or the referenced survey of the anchialine pools (MacIolek & Brock, 1974) identified the endangered Hawaiian stilt (Himantopus mexicanus knudseni) as feeding in the pools. Additionally, the locations of the anchialine pools are not indicated on a map, making it impossible to correlate them with the pools mentioned in the 1974 survey. Some of the pools were considered to be exceptionally valuable because of the rare organisms inhabiting them. The above items should be corrected in the final EIS.

For your information, a permit from the Corps of Engineers under Section 404 of the Clean Water Act will be required if any filling will occur in the anchialine pools.
We appreciate this opportunity to comment.

Sincerely yours,

Lucian Kramer
Acting Project Leader for
Environmental Services

cc: NMFS
HDIFC
Environmental Protection Agency
EPA, San Francisco

Save Energy and You Serve America!

JUN 19 1981



ENVIRONMENTAL
COMMUNICATIONS
INC.

August 5, 1981

Mr. Lucian Kramer, Acting Project
Leader for Environmental Services
Fish and Wildlife Service
U.S. Department of the Interior
P. O. Box 50167
Honolulu, Hawaii 96850

Dear Mr. Kramer:

Subject: Draft Environmental Impact Statement for the Proposed
Kapaloa Condominium Development, North Kona, Hawaii

Thank you for your letter of June 17, 1981 on the above mentioned
Draft EIS. We have reviewed your concerns and provide the following
dispositions:

- 1) Comment: "The DEIS does not adequately describe the
wildlife resources in the project area."

Response: Subsection 3.3.4 (page 9 of the DEIS) and
Table I (page 10) identifies the wildlife in the area. This
description is felt to be sufficient.

- 2) Comment: Relates to the marine resources of the anchialine
pools (information provided was inadequate) the possibility
that the Hawaiian stilt feeds in the pools; locations of the pools
are not identified.
- Response: Further information on the anchialine pools will be
included in the Final EIS. However, it was noted in the DEIS
that the pools will not be altered (section 5.2, page 25 of the
EIS). It was also noted that the grading and earthwork
operations will be completed so as to keep additional surface
runoff from the development away from the pools. This being
the situation, little or no impact on the pools is expected.

Mr. Lucian Kramer, Acting Project Leader
U.S. Fish and Wildlife Service
August 5, 1981
Page 2

- 3) Comment: "...a permit from the Corps of Engineers under Section 404 of the Clean Water Act will be required if any filling will occur in the anchialine pools."
- Response: There are no plans to fill-in or alter the large anchialine pools on the site, subsequently a Department of the Army Permit will not be necessary.

Very truly yours,

F. J. Rodriguez
F. J. Rodriguez

cc: Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.

FJR:CKT:pi



PLANNING DEPARTMENT

26 AUPUNI STAKET • HILo, HAWAII 96740

COUNTY OF
HAWAII

MERRIT MATAYOSHI
Mayor

SIDNEY M. FUKE
Deputy Mayor
DUANE KANDURA
County Director

June 17, 1981

Mr. F. J. Rodriguez
Environmental Communications, Inc.
P. O. Box 536
Honolulu, HI 96804

Dear Mr. Rodriguez:

Comments-Draft EIS Kapalaoa, Inc.

We have reviewed the subject draft EIS for a proposed 120 unit condominium project situated at Puu Anahulu, North Kona, Island of Hawaii and submit the following comments. We would like to initially note that we are in receipt of the 1980 hydrogeologic investigation report by Stephen Bowles and have included information from this report within our comments.

Additionally, we note that the method of treatment for the sewage waste has been changed from that originally proposed, i.e. secondary treated waters will be disposed of in the area through use as irrigation water for lined planters or used directly as irrigation water instead of being hauled away and/or disposed of through injection wells.

1. Since an integral part of the proposed project includes the use of State owned lands for purposes of access, water source, and treated sewage disposal, some discussion is warranted within the Project description section, as to whether any commitments from the State have been secured.

While we realize that the project is still at a conceptual stage, nevertheless the EIS should disclose whether applications for these uses have/have not been filed with the Department of Land and Natural Resources.

Also the proposed access plan (Figure 4) indicates proposed boundary lines enclosing approximately 146.6+ acres.

Is this area also proposed to be leased by the applicant? If so, for what purpose?

Mr. F. J. Rodriguez
Page 2
June 17, 1981

2. With respect to informational requirements as outlined in the EA/Notice of Preparation of a full impact statement, we find that the draft EIS has not identified archaeological sites within the access road corridor, nor discussed the potential impacts, if any. Further, although the text notes that recommendations of the reconnaissance survey will be followed it is not clear whether the petroglyphs will indeed be preserved. No site development plan with a superimposition of the archaeological sites has been included.
3. Page 9 of the EIS notes that several anciinaline ponds are located within the project area. Detailed descriptions of the ponds should have been included within the EIS. While a site development plan with a pond scheme is included, it is not clear whether the pond configurations are as existing or with modifications either in-filling or expansions.
4. Page 14 notes that the Queen Kaahumanu Highway provides a coastal road system from Hawi in North Kohala to Kailua-Kona in North Kona. Please be advised that the section of the coastal highway from Hawi to Kawaihae is named Akoni Hale Highway.
5. The discussion of recreational areas and public parks is somewhat misleading. Anaehoomalu Bay, Hākaiwa Bay and Pauoa Bay have all three been noted in the State Comprehensive Outdoor Recreation Plan as recreational resource areas and reserves. There are however no specific plans by the State nor County to acquire these areas as public parks. Moreover, all three beaches are located within developing resort areas (Waikoloa Beach Resort and Hauna Lani Resort). While public access to these areas have been made available through conditions of approval of various permits and while use of the beaches will be made available to the public, nevertheless, it is not entirely correct to include them as proposed public parks.

Nor is it entirely correct to say that there is no public right of way through the project site to the shoreline. A public shoreline access inventory prepared for the County of Hawaii through the Coastal Zone Management Program notes an ancient trail from Puu Anahulu to Kapāiau (differing from the non-exclusive access easement). While the legal status of the public right of way over the ancient trail is not clear, nevertheless, it is probably more accurate to note that public right of way through the property is still in question.

JUN 22 1981

Mr. F. J. Rodriguez
Page 3
June 17, 1981

Mr. F. J. Rodriguez
Page 4
June 17, 1981

6. While the EIS has been prepared in conjunction with a petition for a General Plan Amendment, the discussion of the relationship of the proposed action to all levels of land use plans, policies and controls should be further detailed. These include policies and regulations or the Conservation District and Resource subzone and the Coastal Zone Management (SMA) designations. Additionally, the General Plan Land Use designation section should include a discussion of the proposed project with respect to its existing designation including goals, policies and standards of that designation.
7. With respect to domestic water supply and source, the EIS notes that a well located approximately a mile east of the proposed access road supplies irrigation water for the Anaehoomalu Golf Course. Water from this well is of a quality suitable for desalinization purposes. The proposed well sites for the Kapalaoa project is located just makai of the Queen Kaahumanu Highway. Please include in the EIS, information of the elevational differences between the Anaehoomalu Golf Course well site and the proposed Kapalaoa well site and the depth at which water of suitable quality was found from the Anaehoomalu Golf Course.

It is not clear from the Bowles report where the test well site was located (we assume that it was on the 15 acre parcel at the coast and not at the proposed well site). This information should be included and the report itself appended to the EIS.
8. Since fire-flow requirements will be best met by shallow on site wells, please include estimates of these water requirements.
9. The discussion of sewage treatment and disposal (page 30) notes the possibility that the treatment plant may process only "black" water with grey water going directly to irrigation. What are the potential impacts to the anchialine ponds and coastal waters (including marine and pond life) from this aspect of the disposal?
10. Single family residential and/or private recreational uses of the project sites should also be considered as alternatives to the proposed action, in particular as they relate to existing land use regulations.

Should you have any questions, please do not hesitate to contact our office.
Sincerely,

SYDNEY SUKE
Planning Director

VKG:WKR

cc: Arnold Ave
Office of Environmental Quality Control
Environmental Quality Commission

ENVIRONMENTAL
COMMUNICATIONS
INC.

August 5, 1981

6/2 ASSOC/2
P/M/2

Mr. Sidney Fuke, Director
Planning Department, County of Hawaii
August 5, 1981
Page 2

Mr. Sidney Fuke, Director
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Fuke:

Subject: Environmental Impact Statement for the Proposed
Kapalaoa Condominium Project, North Kona, Hawaii

Thank you for your letter of June 17, 1981 on the EIS for the
Kapalaoa Condominium Project, located in Puuanahulu, North Kona District,
Island of Hawaii. We have reviewed your concerns with the engineering
consultant and would like to provide the following responses to your
comments.

Comment:

- *1. Since an integral part of the proposed project includes the use of State owned lands for purposes of access, water source, and treated sewage disposal, some discussion is warranted within the project description section, as to whether any commitments from the State have been secured. While we realize that the project is still at a conceptual stage, nevertheless the EIS should disclose whether applications for these uses have/have not been filed with the Department of Land and Natural Resources.

Response: No commitments from the State have been secured. Discussion with DLNR has taken place and the need to file a CDUA is acknowledged in the Final EIS. The developer only owns the project site and does not own the 146.62-acre parcel indicated in your comment.

Comment:

- *2. With respect to informational requirements as outlined in the EA/Notice of preparation of a full impact statement, we find that the draft EIS has not identified archaeological sites within the access road corridor, nor discussed the potential impacts, if any. Further although the text notes that recommendations of the reconnaissance survey will be followed

1150 Bishop Street, Suite 407 • P.O. Box 126 • Honolulu Hawaii 96813 • (808) 531-3240

It is not clear whether the petroglyphs will indeed be preserved. No site development plan with a superimposition of the archaeological sites has been included.*

Response: The initial access road alignment was revised based on the archaeologist's recommendation to avoid a ramp feature along King's Trail. Upon approval of the initial land use designations, the developer will have the archaeologist survey the revised alignment to determine if archaeological features are present. If significant features are present, the alignment will be modified or removed. Mitigation measures will be coordinated with other mitigation measures implemented. These mitigation measures will be coordinated with and approved by the Historic Sites Section of DLNR. A map showing the superimposition of archaeological sites on the development plan was not included because almost all of the sites will be affected, and the precise location of the archaeological sites were not mapped. Subsequently, such a map would be too generalized for inclusion into the EIS. Also, reviewing Figures 2 and 5 would provide the reviewer with an overall indication of the projects impact on archaeological sites.

Comment:

- *3. Page 9 of the EIS notes that several anchialine ponds are located within the project area. Detailed descriptions of the ponds should have been included within the EIS. While a site development plan with a pond scheme is included, it is not clear whether the pond configurations are as existing or with modifications either in-filling or expansions.

Response: There are several anchialine pools on the project site. Some have been filled-in through erosional processes, and other smaller pools, are not permanent. The pools shown on the development plan (Figure 2) are existing and will be left in their natural state wherever possible. At this time, the development plan incorporates all the large pools without modifications.

Comment:

- *4. Page 14 notes that the Queen Kaahumanu Highway provides a coastal road system from Hilo in North Kohala to Kailua-Kona in North Kona. Please be advised that the section of the coastal highway from Hilo to Kawaihae is named Akoni Pule Highway.*

Response: This will be noted in the Final EIS.

Comment:

"5. The discussion of recreational areas and public parks is somewhat misleading. Anaeoomalu Bay, Makaiwa Bay and Pauoa Bay have all three been noted in the State Comprehensive Outdoor Recreation Plan as recreational resource areas and reserves. There are however no specific plans by the State nor County to acquire these areas as public parks. Moreover, all three beaches are located within developing resort areas (Waikoloa Beach Resort and Mauna Lani Resort). While public access to these areas have been made available through conditions of approval of various permits and while use of the beaches will be made available to the public, nevertheless, it is not entirely correct to include them as proposed public parks."

"Nor is it entirely correct to say that there is no public right of way through the project site to the shoreline. A public shoreline access inventory prepared for the County of Hawaii through the Coastal Zone Management Program notes an ancient trail from Puu Anahulu to Kapalaoa (differing from the non-exclusive access easement). While the legal status of the public right of way over the ancient trail is not clear, nevertheless, it is probably more accurate to note that a public right of way through the property is still in question."

Response: These comments will be incorporated into the text of the Final EIS. The comment on the public right-of-way will be included in the Final EIS.

Comment:

"6. While the EIS has been prepared in conjunction with a petition for a General Plan Amendment, the discussion of the relationship of the proposed action to all levels of land use plans, policies and controls should be further detailed. These include policies and regulations of the Conservation District and Resource subzone and the Coastal Zone Management (SMA) designations. Additionally, the General Plan land use designation section should include a discussion of the proposed project with respect to its existing designation including goals, policies and standards of that designation."

Response: Discussion of the project in relationship to the Conservation District and Resource subzone and the Coastal Zone Management objectives and policies will be included in the Final EIS.

Comment:

"7. With respect to domestic water supply and source, the EIS notes that a well located approximately a mile east of the proposed access road supplies irrigation water for the Anaeoomalu Golf Course. Water from this well is of a quality suitable for desalination purposes. The proposed well sites for the Kapalaoa project is located just makai of the Queen Kaahumanu Highway. Please include in the EIS, information of the elevational differences between the Anaeoomalu Golf Course well site and the proposed Kapalaoa well site and the depth at which water of suitable quality was found from the Anaeoomalu Golf Course."

"It is not clear from the Bowles report where the test well site was located (we assume that it was on the 15 acre parcel at the coast and not at the proposed well site). This information should be included and the report itself appended to the EIS."

Response: A preliminary engineering report estimates that the elevation of the Anaeoomalu Golf Course is +50 feet above mean sea level, and the proposed Kapalaoa well site is at an elevation of +40 feet above mean sea level. The groundwater table is estimated to be +2 feet mean sea level.

The test well was located in the northwest corner of the property. The approximate location of the well will be indicated on Figure 4. The approximate elevation is 5 feet above mean sea level.

Comment:

"8. Since fire-flow requirements will be best met by shallow on site wells, please include estimates of these water requirements."

Response: As per the County of Hawaii, Department of Water Supply system standards, the fire-flow requirements for single family dwellings is 1,000 gpm (gallons per minute) for a 1-hour duration. This is 60,000 gallons per day (gpd).

Mr. Sidney Fuke, Director
Planning Department, County of Hawaii
August 5, 1981
Page 5

Comments:

- *9. The discussion of sewage treatment and disposal (page 30) notes the possibility that the treatment plant may process only "black" water with grey water going directly to irrigation. What are the potential impacts to the anchialine ponds and coastal waters (including marine and pond life) from this aspect of the disposal?

Response: It was expected that the waste treatment system will separate the sewage into solid waste and wastewater. The solid waste will be treated and disposed in accordance with State and County standards, while the treated wastewater will be mixed with other waters to irrigate the planter areas. The planters will be lined with an impervious liner to prevent the wastewater from leaching into the groundwater; therefore, no potential impacts on the anchialine ponds are expected.

Comments:

- *10. Single family residential and/or private recreational uses of the project sites should also be considered as alternatives to the proposed action, in particular as they relate to existing land use regulations.

Response: These alternative actions were not considered because they were not viable alternatives to a private developer.

We appreciate your concerns in this matter.

Very truly yours,



F. J. Rodriguez

cc: Mr. Arnold Abe, Esq.



DEPARTMENT OF PLANNING
AND ECONOMIC DEVELOPMENT

COMMERCIAL 70 SOUTHERN ST., HONOLULU, HAWAII 96813
HAWAII STATE GOVERNMENT BUILDING

C O P Y

June 18, 1981

Ref. No. 3265

Mr. Sidney Fuke, Director
Planning Department
County of Hawaii
25 Apupuni Street
Honolulu, Hawaii 96720

Dear Mr. Fuke:

SUBJECT: Kapalao Condominium Development Draft Environmental
Impact Statement, North Kona, Island of Hawaii

We have reviewed the subject draft environmental impact statement
and offer the following comments with respect to the relevant objectives and
policies of the Hawaii Coastal Zone Management Program, as well as other
planning considerations.

Recreational Resources

C24 Policy:

Provide adequate, accessible, and diverse recreational
opportunities in the coastal zone management area by
encouraging expanded public recreational use of County, State
and Federally owned or controlled shoreline lands and waters
having recreational value.

Comments:

The proposed project would remove this site from future
consideration for public recreational use. Subsequent to
discussions with the proper governmental authorities on the
recreational use with regard to this area, the EIS should be
revised to discuss in detail: existing recreational sources on
the site (e.g., fishing, swimming, etc.); impact upon these
existing recreational resources due to the proposed
development; and the question of public access to the shore.
Also the EIS should further elaborate on the State and County
plans for recreational facilities involving the project site
and the impact that this development will have on these plans.

Mr. Sidney Fuke
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June 18, 1981

Finally, those plans which involve the project site for
recreational use should be included in the discussion on
alternatives to the proposed action.

Scenic and Open Space Resources

C24 Policy:

Identify valued scenic resources in the coastal zone management
area.

Comments:

The proposed development will be built on a site that is
currently undeveloped and will be surrounded by open space.
Revisions to the EIS should describe the scenic and open space
resources of the site to include existing views out of the
nearest coastal highway (Queen Kaahumanu Highway) toward the
site and views along the shoreline. There should also be a
discussion of the impact that this development would have on
these view planes, as well as any appropriate mitigation
measure which need to be taken.

Coastal Ecosystem

C24 Policy:

Preserve valuable coastal ecosystems of significant biological
or economic importance.

Comments:

because of the development's proximity to the shoreline and the
presence of several anchialine ponds on the project site, the
draft EIS should include a description of the marine life that
exists in the nearshore waters and anchialine ponds. The
impacts of the development upon these marine biota should also
be identified and discussed in detail, together with any
appropriate mitigation measure which may be necessary.

Coastal Hazards

C24 Policies:

Control development in areas subject to storm wave, tsunami,
flood, erosion, etc.; subdivide hazard; ensure that developments
comply with requirements of the Federal flood insurance plan.

JUN 24 1981

Mr. Sidney Fuke
Page 3
June 16, 1981

Mr. Sidney Fuke
Page 4
June 16, 1981

Comment:

The project site lies within a flood hazard area. Flood insurance rate maps indicate that the site is located on a 100-year flood plain within a coastal high hazard area. Although some mitigation measures have been proposed in the EIS, further assurances are needed that the development will be in full compliance with the County-implemented requirements of the Federal Flood Insurance Program.

Office of Environmental Quality Control:

Section 4, "The Relationship of the Proposed Action to Land Use Plans, Policies, et al. Concerning the Affected Area," should be revised to include a discussion of the impacts on the policies and guidelines regarding development within the Special Management Area as defined by Hawaii County Planning Commission's Rule No. 1, "Rules and Regulations Relating to Environmental Shoreline Protection of the County of Hawaii."

Further, the draft EIS states that the developers have petitioned the State Land Use Commission for a Boundary Amendment to change the land use designation to Urban. The EIS should additionally state that both the DPEI's and the County of Hawaii Planning Department have testified in opposition to this boundary amendment before the LUC. It should be stated that DPEI's recommendation of denial was in part based upon the inconsistency of the project with the objectives and policies of the Hawaii Coastal Zone Management Program relating to the recreational resources, scenic and open space resources, coastal ecosystems and coastal hazards.

General:

Previous comments by the DPEI on the EIS preparation notice relating to the land for this development at this time are not addressed in the draft EIS. The "Land Use Analysis" on pages 21-22 of the draft EIS only discusses the project relative to the Hawaii County General Plan. There is no discussion relative to the need for the proposed urban reclassification and use of the subject property in view of the large amount of vacant urban district lands in both North Kona and South Kohala.

Comment:

The draft EIS states that the project is not permitted, use "within the Resource Subunit of the Conservation District. The following detail what users are permitted under the Resource Subunit of the Conservation District, as provided by Resolution No. 4, 1981.

Frank Giovanni
Hawaiian Monk Seal

Comment: Thank you for the opportunity to comment on this matter.

Sincerely,

cc: Kopaleo, Inc.
c/o Environmental Communications, Inc.

Office of Environmental Quality Control

ENVIRONMENTAL
COMMUNICATIONS
INC.

F. J. Rodriguez,
President

August 5, 1981

Mr. Hideto Kono, Director
Department of Planning and
Economic Development
State of Hawaii
P. O. Box 2359
Honolulu, Hawaii 96804

Dear Mr. Kono:

Subject: Draft Environmental Impact Statement (EIS) for Proposed
Kipalao Condominium Project, North Kona, Hawaii

Thank you for your comments of June 18, 1981, on the Draft EIS
for the proposed Kipalao Condominium Development in North Kona,
Island of Hawaii. Your comments have been reviewed; responses to
each of your comments are provided below.

Comment: "The proposed project would remove this site from future
consideration for public recreational use. Subsequent to
discussions with the proper governmental authorities on the
recreational use with regard to this area, the EIS should be
revised to discuss in detail existing recreational sources
on the site (e.g., fishing, swimming, etc.) impact upon
these existing recreational resources due to the proposed
development; and the question of public access to the shore.
Also the EIS should further elaborate on the State and
County plans for recreational facilities involving the project
site and the impact that this development will have on these
plans. Finally, those plans which involve the project site
for recreational use should be included in the discussion on
alternatives to the proposed action."

Response: The developer has initiated requests for State and County
land use changes. If these land use changes are approved, details
relating to shoreline access will be coordinated with the County's Depart-
ment of Parks and Recreation. The EIS addresses, in as much detail as
possible, the recreational aspects and public access through the project
site, on pages 16, 31, 33, 35, and 52.

Comment: "The proposed development will be built on a site that is
currently undeveloped and will be surrounded by open space.
Revisions to the EIS should describe the scenic and open
space resources of the site to include existing views makai of
the nearest coastal highway (Queen Kaahumanu Highway)
toward the site and views along the shoreline. There should
also be a discussion of the impact that this development
would have on these view planes, as well as any appropriate
mitigation measure which need to be taken."

Response: Impact on the view planes will be discussed.

HHS-BEST-REF ID: A407 - FEB 19 1982 - MONTE REED, M.A. - HAWAII DEPT OF PLANNING

Comment: "Because of the development's proximity to the shoreline
and the presence of several anchialine ponds on the project
site, the draft EIS should include a description of the marine
life that exists in the nearshore waters and anchialine ponds.
The impacts of the development upon these marine biota
should also be identified and discussed in detail, together with
any appropriate mitigation measure which may be necessary."

Response: Additional discussion on the coastal ecosystems will be
provided in the Final EIS.

Comment: "The project site lies within a flood hazard and tsunami
inundation area. Flood insurance rate maps indicate that
the site is located on a 100-year flood plain within a
coastal high hazard area. Although some mitigation measures
have been proposed in the EIS, further assurances are
needed that the development will be in full compliance with
the County-implemented requirements of the Federal Flood
Insurance Program."

Response: As the development proceeds mitigation measures will be
identified and incorporated into the project plans.

Comment: "Section 4, 'The Relationship of the Proposed Action to Land
Use Plans, Policies, and Controls for the Affected Area,' should
be revised to include a discussion of the impacts on the policies
and guidelines regarding developments within the Special
Management Area as defined by Hawaii County Planning Commission's
Rule No. 9, 'Rules and Regulations Relating to Environmental
Shoreline Protection of the County of Hawaii'."

"Further, the draft EIS states that the developers have
petitioned the State Land Use Commission for a Boundary
Amendment to change the land use designation to Urban.
The EIS should additionally state that both the DPED and
the County of Hawaii Planning Department have testified in
opposition to this boundary amendment before the LUC. It
should be stated that DPED's recommendation of denial was
in-part based upon the inconsistency of the project with the
objectives and policies of the Hawaii Coastal Zone Management
Program relating to the recreational resources, scenic and
open space resources, coastal ecosystems and coastal hazards."

Response: This will be acknowledged in the Final EIS.

Mr. Hideto Kono, Director
Department of Planning and Economic
Development, State of Hawaii
August 5, 1981
Page 3

Mr. Hideto Kono, Director
Department of Planning and Economic
Development, State of Hawaii
August 5, 1981
Page 4

Comment: "Previous comments by the DPED on the EIS preparation notice relating to the need for this development at this time are not addressed in the draft EIS. The Land Use Analysis on pages 21-23 of the draft EIS only discusses the project relative to the Hawaii County General Plan. There is no discussion relative to the need for the proposed urban reclassification and use of the subject property in view of the large amount of vacant urban district lands in both North Kona and South Kohala."

Response: The urbanization of the project site is addressed on the basis on the County General Plan because it was felt that such a discussion would incorporate concerns about State reclassification. Rationale for a request to the State Land Use Commission to reclassify the land was identified at the proceedings and subsequently the need to reiterate that material in the Final EIS does not appear to be necessary.

82 Comment: "The draft EIS states that the project is not permitted use within the Resource subzone of the Conservation District. The EIS should detail what uses are permitted under the Resource subzone of the Conservation District, as provided by Regulation No. 4, DLNR."

Response: This information will be included in the Final EIS.

Comment: "Since the project involves a residential development, the EIS should address the impact of the project upon the present supply and demand for housing in West Hawaii. This discussion should examine the existing housing needs of West Hawaii and how this project will affect it."

Response: This project, while providing residential housing, will be luxury dwelling units. Subsequently, it would be affordable to a very specific market sector. It is anticipated that the proposed project will have very little if any impact on other housing projects in the West Hawaii region.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.

FJR:CKT:pl



ENVIRONMENTAL
COMMUNICATIONS
INC.

University of Hawaii at Manoa

F.O. Rodriguez
President

August 5, 1981

Water Resources Research Center
Holmes Hall 283 • 2540 Dole Street
Honolulu, Hawaii 96822

18 June 1981

Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720

SUBJECT: Draft EIS for the Proposed Kapaiaoa Condominium Development,
North Kona, May 1981

We have reviewed the subject DEIS and offer the following comments:

1. Regarding the sewage disposal system, what is the life expectancy of the impervious liner, and what provisions are there for replacement in case of failure or puncture?
2. Since the sewerage system is semi-closed with no leaching, serious consideration should be given to the accumulation of salts and compounds in the soil which would have a deleterious effect on plant growth.
3. The developers should consider electrodialysis (ED) as an alternative to reverse osmosis (RO) for water treatment. Although RO systems are efficient with feed waters less than 1500 mg/l chloride, energy-wise the breaking point between RO and ED is at 1200 mg/l chloride. ED is more energy efficient below this level. A study of existing wells in the adjacent areas showed that the chloride content was less than 1200 mg/l (See Water Resources Research Center, University of Hawaii, Technical Report 105; Hydrologic and Ecologic Inventories of the Coastal Waters of West Hawaii).
4. Buyers of the project should be notified of the natural hazards such as tsunami.

83

Thank you for the opportunity to review this EIS. The material was reviewed by WRRRC personnel.

Sincerely,
E.T. Murabayashi
Edwin T. Murabayashi
EIS Coordinator

EIS:Jm
cc: H. Yee
Y.S. Fok
Kapaiaoa, Inc.
Env. Center

AN EQUAL OPPORTUNITY EMPLOYER
113 Buena Building, Suite 403 • P.O. Box 343 • Honolulu, Hawaii 96822 • Telephone 537-2430

JUN 23 1981

Mr. Edwin T. Murabayashi
EIS Coordinator
Water Resources Research Center
University of Hawaii, Holmes Hall 283
2540 Dole Street
Honolulu, Hawaii 96822
Dear Mr. Murabayashi:

Gentlemen:
Subject: Draft EIS for the Proposed Kapaiaoa Condominium
Project, Puanahulu, North Kona, Hawaii

Thank you for your letter of June 15, 1981 on the EIS for the Kapaiaoa Condominium Project, located in Puanahulu, North Kona District, Island of Hawaii. We have reviewed your concerns with the consulting engineers and would like to provide the following responses to your comments.

Comments:

1. Regarding the sewage disposal system, what is the life expectancy of the impervious liner, and what provisions are there for replacement in case of failure or puncture?*

Response: The impervious liner, usually polyethylene, can be expected to last indefinitely as long as it is not punctured by the roots or rocks. If a puncture should occur, the impervious liner must be repaired or replaced.

Comments:

2. Since the sewerage system is semi-closed with no leaching, serious consideration should be given to the accumulation of salts and compounds in the soil which would have a deleterious effect on plant growth.*

Response: According to EPA reference, evapo-transpiration systems have no significant problems due to salt accumulation. However, the landscape consultant will be advised of this potential problem so that more salt tolerant plants may be selected.

113 Buena Building, Suite 403 • P.O. Box 343 • Honolulu, Hawaii 96822 • Telephone 537-2430

Mr. Edwin T. Murabayashi, EIS Coordinator
University of Hawaii, Water Resources Research Center
August 5, 1981
Page 2

Comment:

*3. The developers should consider electrodialysis (ED) as an alternative to reverse osmosis (RO) for water treatment. Although RO systems are efficient with feed waters less than 1500 mg/l chloride, energy-wise the breaking point between RO and ED is at 1200 mg/l chloride. ED is more energy efficient below this level. A study of existing wells in the adjacent areas showed that the chloride content was less than 1200 mg/l (see Water Resources Research Center, University of Hawaii, Technical Report 105: Hydrologic and Ecologic Inventories of the Coastal Waters of West Hawaii).

Response: It is acknowledged that electrodialysis (ED) is more energy efficient than reverse osmosis (RO). However, RO offers some distinct advantages in that a system has been constructed and made operational in the State of Hawaii and a local supplier experienced with RO applications is available. Also the operations and maintenance of the RO system is simpler and requires less attention than the ED system. For these reasons, the engineering consultants felt that the RO system is more suited for this project than the ED system.

Comment:

*4. Buyers of the project should be notified of the natural hazards such as tsunami.

Response: The developer intends to identify these hazards to potential buyers.

84

Mr. Sidney Fuke, Director
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, HI 96720

Dear Mr. Fuke:

Subject: Environmental Impact Statement for the proposed
Kapalaao Condominium Project

We have reviewed the subject document and offer the following comments.

1. Governor's Acceptance. The EIS indicates that the applicant will seek the use of State lands for access to the project's site. Because of the proposed use of state lands, the EIS must also be accepted by the Governor, following the Environmental Quality Commission's ruling regarding dual actions. This is similar to the proposed Paniau project (refer to our correspondence to you of April 27, 1981).
2. P. 6. The statement, "exclusivity and cost of the units will mitigate against speculation in the units and against the rental of these units" is unsubstantiated. Please provide supporting data.
3. P. 6. The EIS indicates that possibly 15 to 20 jobs may be created once the project is constructed. Will employee housing be constructed in this remote area. If so, this matter should be discussed in the statement.
4. P. 6. The use of State lands is not fully discussed in this section. The applicant is also proposing to use state lands for utility easements, a sewage effluent evapotranspiration system, a brackish water well and a pipeline. Why is a 100 foot wide easement being proposed for a two-lane road? It appears that a possible subdivision of state lands might be proposed, as indicated in figure 4. There is no indication of what this state-owned parcel is presently being used for nor of any archaeological sites on it which may be impacted by the proposed project. A full

Very truly yours,

J. J. Rodriguez

F. J. Rodriguez

cc: Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.

JUN 23 1981

Mr. Sidney Fuke
June 19, 1981
Page Two

discussion is warranted at this time in order to reduce the possible necessity of having to prepare a supplemental statement when and if the use of state lands is requested.

5. P. 9. A detailed discussion of fauna found in the anchialine ponds should be included, rather than referring the reader to another report. The EIS should be a self-supporting document without the need for undue cross-reference. No statements can be made on the potential impact of the pond's fauna without this basic information.

6. P. 14. The project site does not front Queen Kaahumanu Highway, rather, it is landlocked, mostly by state lands.

7. P. 15. Will the necessary powerline be placed underground?

8. P. 16. Kuahuipuaa should be spelled Kalahuipuaa.

9. P. 17. The discussion of archaeological sites should emphasize the fact that a considerable number of the sites are recommended for preservation. There is no discussion of the access road crossing the Kings Trail. The petroglyphs site are listed in the State's Recreation Plan as a resource area for potential use as a recreational or cultural site with the Kings Trail listed as part of a proposed trail system. These recreational resources should be identified in the section on recreation.

10. P. 18. A comparison of this figure with the site plan (figure 2) shows that a majority of the sites recommended for preservation lie in areas planned for buildings or parking lots. Does the developer intend to leave the petroglyphs on the site, or remove them for storage somewhere else?

11. P. 22. The EIS states that, "the extension of urban-type uses to the project site is a logical one and would not be contrary to the containment of the South Kohala resort area;" however, the site is surrounded by conservation district lands.

12. P. 23. The section on the action's relationship to present land use plans and policies requires a thorough discussion of the project's relationship with the objectives and policies of the coastal zone management act. The discussion should refer to the CZM objective to protect, preserve and where desirable, restore or improve the quality of coastal, scenic, and open space resources.

13. P. 24. Will soils be imported to the site for landscaping purposes? Landscape maintenance of the site may

Mr. Sidney Fuke
June 19, 1981
Page Three

introduce pesticides and nutrients into the ponds. There is no discussion of this possible impact, and is recommended.

14. P. 26. The revenue generated by this project may also include lease rents to the State for use of the State lands.

15. P. 29. The total project water demand appears to be 0.3 MGD and not 0.25 as indicated ($50,000 + 250,000$). Whether the withdrawal of the brackish water upslope of the anchialine ponds will have any effect on these ponds is not discussed. This potential should be explored further and discussed.

16. P. 30. There appears to be a discrepancy between expected domestic water usage and sewage outflow. The total project demand for water for domestic use is stated as 50,000 gpd of maximum daily flow of sewage is expected. Five times the average daily flow would be 250,000 gpd, not 150,000 gpd. These calculations should be corrected. There is no discussion of the potential of a breakdown of the sewage disposal system. Where will the effluent go if there is a breakdown? Where will water from the swimming pools be released? The alternative of placing the planters on the project site should be considered and discussed. The potential drainage of grease and oils into the on-site anchialine ponds is not discussed.

17. P. 31. What is the basis for the statement that children residing on the site will primarily attend private schools?

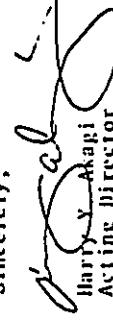
18. P. 31. We believe that the concerns of open space and recreation resources should be addressed within the statement. This allows for better public input into the planning and project review process.

19. P. 35. Historic and cultural resources of the site will be a commitment of this project.

20. P. 53. The project also requires a Conservation District Use Application for the proposed uses of the state-owned conservation lands. As indicated earlier, the statement will have to be accepted by the Governor.

I hope that our comments will be helpful in the preparation of the revised statement. Thank you for the opportunity to review this EIS.

Sincerely,


Harry Y. Akapi
Acting Director

cc: Environmental Communications, Inc.
BLNK

ENVIRONMENTAL
COMMUNICATIONS
INC.

I. J. FERNANDEZ
PRESIDENT

August 5, 1981

Mr. Harry Y. Akagi, Acting Director
Office of Environmental Quality Control
State of Hawaii
550 Halekula Street, Room 301
Honolulu, Hawaii 96813

Dear Mr. Akagi:

Subject: Environmental Impact Statement for the Proposed
Kapalaoa Condominium Project, North Kona, Hawaii

Thank you for your letter of June 19, 1981 on the EIS for the Kapalaoa Condominium Project, located in Puuanahulu, North Kona District, Island of Hawaii. We have reviewed your concerns with the engineering consultant and would like to provide the following responses to your comments.

Comment:

1. Governor's Acceptance. The EIS indicates that the applicant will seek the use of the State lands for access to the project's site. Because of the proposed use of state lands, the EIS must also be accepted by the Governor, following the Environmental Quality Commission's ruling regarding dual actions. This is similar to the proposed Paliakau Project (refer to our correspondence to you of April 27, 1981).

Response: At this time the developer is applying for initial land use Change approvals. Because this is a lengthy process and continuation of the project is dependent on such approvals, the developer has not sought to file other Governmental applications and requests. A CDUA will be required; however, the requirements imposed by that application will be addressed at the time of the application. Subsequently, the need for the Governor's acceptance will be determined and processed at the appropriate time.

Comment:

*2. p. 6. The statement, "exclusivity and cost of the units will mitigate against speculation in the units and against the rental of these units" is unsubstantiated. Please provide supporting data."

Response: A proposed project such as this is expected to be sold prior to construction completion. This information was obtained from the developer.

Mr. Harry Y. Akagi, Acting Director
Office of Environmental Quality Control
August 5, 1981
Page 2

Comment:

*3. p. 6. The EIS indicates that possibly 15 to 20 jobs may be created once the project is constructed. Will employee housing be constructed in this remote area. If so, this matter should be discussed in the statement."

Response: No employee housing will be provided.

Comment:

*4. p. 6. The use of State lands is not fully discussed in this section. The applicant is also proposing to use state lands for utility easements, a sewage effluent evapotranspiration system, a brackish water well and a pipeline. Why is a 100 foot wide easement being proposed for a two-lane road? It appears that a possible subdivision of State lands might be proposed, as indicated in figure 4. There is no indication of what this state-owned parcel is presently being used for nor of any archaeological sites on it which may be impacted by the proposed project. A full discussion is warranted at this time in order to reduce the possible necessity of having to prepare a supplemental statement when and if the use of state lands is requested.

Response: The extent of use of the State-owned lands will be elaborated on in the EIS. A 100-foot wide easement was selected to provide adequate space for the roadway, utilities, landscaping, and for any other installation that may be required. Furthermore, a 100-foot wide easement for the roadway will afford sufficient room in the event a parkway type of entrance is desirable. The State lands proposed to be used are presently vacant. The archaeological sites on the State lands, to be affected by the roadway and wells will be surveyed to prevent the destruction of significant archaeological sites. The Historic Sites Section of DLNR will be consulted and appropriate archaeological actions taken as the project proceeds. The requirement for supplemental statement and additional requirements (e.g. Governor's acceptance) will be determined by the approving agency at the appropriate time.

RECORDED - DEPARTMENT 407 - R. C. F. - 8/5/81 - FILED - HISTORIC SITES

Comment:

5. P. 9. A detailed discussion of fauna found in the anchialine ponds should be included, rather than referring the reader to another report. The EIS should be a self-supporting document without the need for un-due cross-reference. No statements can be made on the potential impact of the ponds' fauna without this basic information.

Response: Information on the fauna found in the anchialine ponds will be included in the Final EIS.

Comment:

6. P. 14. The project site does not front Queen Kaahumanu Highway, rather, it is landlocked, mostly by state lands.

Response: This is a correct statement and will be included in the text of the Final EIS.

Comment:

7. P. 15. Will the necessary powerline be placed underground?

Response: Unless required, the powerlines will be overhead.

Comment:

8. P. 16. Kushupuu should be spelled Kalahupuu.

Response: This will be corrected in the Final EIS.

Comment:

9. P. 17. The discussion of archaeological sites should emphasize the fact that a considerable number of the sites are recommended for preservation. There is no discussion of the access road crossing the Kings Trail. The petroglyphs site are listed in the State's Recreation Plan as a resource area for potential use as a recreational or cultural site with the Kings Trail listed as part of a proposed trail system. These recreational resources should be identified in the section on recreation.

Response: The number of sites recommended to be preserved will be noted in the impact section on archaeological sites. When the final approved road alignment is set, the archaeological consultant will survey the specific alignment and determine the impact on archaeological sites. Specifically, Kings Trail must be crossed and the archaeologist will be determining if the section the road alignment crosses will impact a prominent feature/features on the Trail. The road alignment must be coordinated with and approved by the Historic Sites Division of DLNR. The section on recreation will include the information on archaeological/historical resources.

Comment:

10. P. 18. A comparison of this figure with the site plan (figure 2) shows that a majority of the sites recommended for preservation lie in areas planned for buildings or parking lots. Does the developer intend to leave the petroglyphs on the site, or remove them for storage somewhere else?

Response: The petroglyphs will likely be removed, relocated and displayed within the project development.

Comment:

11. P. 22. The EIS states that, 'the extension of urban-type uses to the project site is a logical one and would not be contrary to the containment of the South Kohala resort area'; however, the site is surrounded by conservation district lands.

Response: This is true; however, several other resort areas in South Kohala are also surrounded by conservation designated lands. It is the "cluster" concept of resort uses that is being described in this case, and not the continuous resort uses.

Comment:

"12. P. 23. The section on the action's relationship to present land use plans and policies requires a thorough discussion of the project's relationship with the objectives and policies of the coastal zone management act. The discussion should refer to the CZM objective to protect, preserve and where desirable, restore or improve the quality of coastal, scenic, and open space resources."

Response: The CZM objectives and policies will be reviewed and included in the Final EIS.

Comment:

"13. P. 24. Will soils be imported to the site for landscaping purposes? Landscape maintenance of the site may introduce pesticides and nutrients into the ponds. There is no discussion of this possible impact, and is recommended."

Response: Soil will be imported for the planters. A 10 percent coverage of area is anticipated to be imported. The landscape plan will incorporate the types of plants which can be readily grown in this environment. The use of pesticides and fertilizers should be minimal; however, impact to the ponds from such a source may occur.

Comment:

"14. P. 26. The revenue generated by this project may also include lease rents to the State for use of the State lands."

Response: This is correct and will be noted in the Final EIS.

Comment:

"15. P. 29. The total project water demand appears to be 0.3 MGD and not 0.25 as indicated (50,000 + 250,000). Whether the withdrawal (sic) of the brackish water up-slope of the anachaline (sic) ponds will have any effect on these ponds is not discussed. This potential should be explored further and discussed."

Response: The corrections will be made as noted. It is estimated that three million gallons of groundwater flows per day; this means that about 10 percent of the water will be withdrawn per day. Preliminary investigations indicate that there will be little or no change to the anachaline ponds and that the aquatic life in the ponds should not be affected by small changes in the salinity.

Comment:

"16. P. 30. There appears to be a discrepancy between expected domestic water usage and sewage outflow. The total project demand for water for domestic use is stated as 50,000 Gpd of maximum daily flow of sewage is expected. Five times the average daily flow would be 250,000 Gpd, not 150,000 Gpd. These calculations should be corrected. There is no discussion of the potential of a breakdown of the sewage disposal system. Where will the effluent go if there is a breakdown? Where will water from the swimming pools be released? The alternative of placing the planters on the project site should be considered and discussed. The potential drainage of grease and oils into the on-site anachaline ponds is not discussed."

Response: The calculations will be corrected. The sewage disposal system will have a back-up system to temporarily treat or store the sewage. The effluent will collect in the available storage facilities in the sewage disposal system and await processing. The swimming pool water can be "blended" into the irrigation water. The planters will be put on the site as required to treat the wastewaters. The drainage of grease and oils will be controlled by limiting the areas that the cars can be washed (the major source of grease and oil), also berms and ditches will divert surface runoff away from the anachaline pools. Finally grease traps will be constructed as needed to control the grease and oils into the sewage system.

Mr. Harry Y. Akagi, Acting Director
Office of Environmental Quality Control
August 5, 1981
Page 7

Mr. Harry Y. Akagi, Acting Director
Office of Environmental Quality Control
August 5, 1981
Page 8

Comment:

*17. P. 31. What is the basis for the statement that children residing on the site will primarily (sic) attend private schools?

Response: The cost of the units will require that the purchasers qualify as upper-middle or upper income families. Considering the use of the units as a seasonal residence or second residence, it is logical to assume that the project will have a very few, if any school-aged children and that such families will be financially able to place their children in private schools.

Comment:

*18. P. 31. We believe that the concerns of open space and recreational resources should be addressed within the statement. This allows for better public input into the planning and project review process.

Response: It is felt that the concerns of open space and recreational resources are addressed in the statement.

Comment:

*19. P. 35. Historic and cultural resources of the site will be a commitment of this project.

Response: This will be noted in the Final EIS.

Comment:

*20. P. 53. The project also requires a Conservation District Use Application for the proposed uses of the state-owned conservation district lands. As indicated earlier, the statement will have to be accepted by the Governor.

Response: The need for a CDUA will be identified in the Final EIS. The response to the Governor's acceptance of the EIS is provided in reply to your item 1, above.

We appreciate your concerns in this matter.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.

FJR:CKT:pl

We appreciate your concerns in this matter.

Very truly yours,

F. J. Rodriguez

F. J. Rodriguez

cc: Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.

FJR:CKT:pl

Na Ala Hele
P.O. Box 1628
Kailua-Kona, HI. 96750
June 21, 1981

A Recap", First Hawaiian Bank's Economic Indicators, April 1981)
Already existing hotels (and their employees) cannot afford the
added competition of more condominium units.
We greatly appreciate this opportunity to participate in the
EIS process.

Re: Comments on the EIS for the
luxury condominium at Kapalaoa,
North Kona, HI.

County of Hawaii Planning Department
25 Aupuni St.
Hilo, HI. 96720

Dear Sirs:

The Na Ala Hele organization is concerned about public access provisions should this Kapalaoa development be approved. As you are aware, the Mauna Lani Resort provides for a public shoreline trail which we would like to see eventually become a continuous shoreline accessway along the Big Island's west coast. This Kapalaoa project is located within the Ala Kahakai Trail System, a shoreline trail proposal originally promoted by Hawaii's State and County governments in 1973. (See "Na Ala Hele", a publication by the State Departments of Land and Natural Resources and Planning and Economic Development, 1973)

The commonly termed "King's Highway" is also a prominent feature in the Kapalaoa area. It is worthy of historic registry and is considered an "old government road" on tax maps. That trail should be retained by the State of Hawaii at Kapalaoa, as a section of it is being retained in the recent Mauna Lani Resort Agreement with the State Board of Land and Natural Resources. Please also address these trail concerns in light of the Highways Act of 1892.

As for the condominium itself, will more condominium units in the Anaeo-Omau-Kapalaoa area be beneficial to the Big Island's economy? Condominium pose additional competition to hotels which are presently struggling to keep occupancy rates at a profitable level. Many of the jobs offered by presently operating hotels are unstable, casual and/or part-time. In terms of employment for our residents, another condominium will not offer significant employment opportunities and possibly could harm employment at hotels which lay-off workers when business is poor. 6,970 condominium units have already been proposed for the South Kohala area alone. The major resort areas of Anaeho-Omau and Kalahuipua'a have not yet opened for business, nor have they constructed their already approved condominium units. Those major resort areas could be more than sufficient to accommodate the tourist traffic which has been on the decline." However, with the downturn in tourism last year (1980) and an expansion of 4,000 rooms in the hotel inventory, occupancies have plunged to their lowest levels in 10 years.... The lowest occupancy rates for any area were found in Hilo-- an average 37.1%.....Kona's occupancy rate declined from an average 77.47% (1979) to 67.18% (1980)...." (Source: "Hawaii in 1980 -

2.
Sincerely,
Deborah Chang Abreu
Deborah Chang Abreu
President, NA ALA HELE

cc: Vicki Rodriguez

JUN 23 1981

ENVIRONMENTAL
COMMUNICATIONS
INC.

F. J. RODRIGUES
PRESIDENT

August 5, 1981

Ms. Deborah Chang Abreu, President
Na Ala Hele
P. O. Box 1628
Koalakekua, Hawaii 96750

Dear Ms. Abreu:

Subject: Environmental Impact Statement (EIS) for Proposed
Kapahoa Condominium Project, North Kona, Hawaii

Thank you for your letter of June 21, 1981 commenting on the
Draft EIS for the Kapahoa Condominium Project, located in Puuanahulu,
North Kona, Hawaii. We have reviewed your concerns with the developer
and the consulting archaeologist, and would like to provide the following
responses to your comments.

Comment: Public access through the property is desirable.

Response: It is too premature to discuss details of public access.
The developer has submitted requests to the State and County for
land use designation changes; if granted, specific details relating
to engineering, use of State lands, access, etc. will be prepared.
Public access will be a major concern that will be discussed and coordi-
nated with the Department of Parks and Recreation, County of Hawaii.
It is acknowledged that public access must be provided to the shoreline;
the basic question is where this access route can be established for the
common good. Adjacent State-owned lands may prove to be the logical
location of public access to the shoreline.

Comment: Retaining King's Highway or King's Trail.

Response: King's Trail is not on the project site but will be affected
by the access road (located on State land). The access road alignment
will be surveyed by the consulting archaeologist to determine if any
prominent archaeological features are found on the alignment. The
alignment will be set to avoid such features (especially along the Trail).
All archaeological work on State lands will be coordinated with and
approved by the Department of Land and Natural Resources.

Ms. Deborah Chang Abreu, President
Na Ala Hele
August 5, 1981
Page 2

Comment: Will the condominium units in the area be beneficial to the
Big Island's economy?

Response: These units will be pre-sold and owned by individual owners;
it is anticipated that the employment created will be permanent, and not
seasonal.

We appreciate your concerns in this matter.

Very truly yours,

F. J. Rodriguez
F. J. Rodriguez

cc: Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.

FJR:CKT:pl

University of Hawaii at Manoa



Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 944-7381

Office of the Director

June 22, 1981

RE:0332

Mr. Sidney M. Fuke, Director
Planning Department
County of Hawaii
25 Aupuni Street
Hilo, Hawaii 96720
Dear Mr. Fuke:

Draft Environmental Impact Statement Kapalaoa Condominium Project Kapalaoa, Puuanahulu, North Kona, Hawaii

The Environmental Center has reviewed the above EIS with the assistance of Donald Bell, Real Estate; Joseph Halbig, UH-Hilo George Lovelace, Archaeology; Jacqueline Miller, Alexis Cheong Linder, and Garret Kawamura, Environmental Center.

Our comments focus on several areas which we believe did not receive adequate and/or accurate attention in the Draft EIS. While the focus of the review concerns the proposed General Plan amendment, we have also commented on several physical aspects of the proposed project.

2.0 Project Description

In light of the many legal, physical and economic constraints placed upon the project's viability, it seems that the statement of objectives (2.1) should consider much more than the site's "ideal natural environment." Are the project's objectives purely economic or do they address local (county) concerns?

The economic characteristics presented in Section 2.3 need to be clarified. The words "costs" and "prices" are so intermingled that a professional evaluation is hampered. In this section as well as "social characteristics" (2.6), the impacts of the project are premised on a 75 percent sale to affluent, elderly Canadians. How have the authors of the Draft EIS arrived at this figure? Has a market analysis been prepared for the project? This arrangement is possibly illegal under Hawaii's requirement under an anti-speculation control act that a project's units be offered to the general public for sale. Any change in the demographic profile of the projects residents would alter the project's social impacts.

June 22, 1981

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3.9 Natural Resources

Considering that the anchialine ponds on-site are a unique ecosystem and are likely to contain animals indigenous to these islands they should be considered a natural resource. Why hasn't a description of the ponds been included in this section? Although they have been mentioned elsewhere in the document there are no descriptions of location flora and fauna and the anticipated impacts of all phases of the proposal on the anchialine ponds. Will this information be included in the forthcoming revision of the EIS? What types of "unique marine life" are found in the nearshore marine waters? How will this proposal affect the "unique marine life?" what measures are to be employed to minimize these effects?

4.0 Relationships to Land Use Plans

The land use analysis of the proposed project appears vague and unsupported in many respects. It begins by stating that the County of Hawaii General Plan is designed to portray a "desirable future for the Island of Hawaii." How does the proposed project fit into this desired scenario?

Pages 20-21 of the Draft EIS lists the goals, policies and standards relating to multiple-family residential use. Since this EIS is being prepared along with a petition for General Plan amendment, the document's land use analysis should address the County's current plans for the project site. What are the County's policies and goals associated with areas designated open, with reference made to the area's draft development plan? This should be a portion of the "clearly articulated objectives" mentioned in the last paragraph of the analysis.

The first sentence of paragraph 2 of the land use analysis is incorrect and misleading. The area under consideration is not visualized as a high quality resort area in the General Plan. Paragraph 4 more accurately describes the present situation by indicating that the project site located south of one of the designated resort areas. Much of the ambiguity in this part of the analysis could be removed by reproducing the County's General Plan maps and including them in the Final EIS.

The land use analysis states that while the proposed project would be "complementary to the planned major resort areas in the south Kona regions (paragraph 6), it would not be a major extension" of this resort area (paragraph 7). What are the criteria used in the determination that the "extension of urban-type uses to the project site is a logical one (paragraph 4)? The document states that the high costs of development are likely to reinforce the lack of further development in this area, without providing supporting any data. How does the proposed project qualify as an exception to this assumption?

In paragraph 7 the costs of development are once again cited as reasons which will ensure that the area south of the project site will remain as open space with recreational values. Again, how is this assumption arrived at and how does the proposed Kapalaoa Condominium fall into an exceptional class? The Draft EIS fails to document how the proposed project will overcome the high costs of development while other developers would, presumably, not even consider a similar development. The Final EIS should elaborate on these unanswered questions.

AN EQUAL OPPORTUNITY EMPLOYER

JUN 23 1981

June 22, 1981

Mr. Sidney M. Fuke

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Another area which deserves more attention is the way in which a resort-residential development would compliment a major resort development area. What are the physical and economic relationships between the proposed project and the major complex of hotels to the north (Anahoomalu)? In other words, the "intimate" relationship referred to in paragraph 4 needs some explanation.

With respect to the state and County plans for the proposed project site as open and conservation, the land use analysis lacks a discussion of the fringe spillover of activities which may result from the proposed project. What is the basis of the conclusion that this secluded residential project will not have any negative impacts on the resort areas to the north and the open areas to the south?

Due to the many questions left unanswered in the land use analysis, the conclusion that the General Plan amendment would reinforce the development of a resort area without expanding urban land uses (paragraph 12) seems unacceptable. How will an isolated, private residential development without public beach access enhance Hawaii's tourist industry?

5.2 Impact on Water Quality and the Coastal and Marine Environment

Does the applicant intend to use fertilizers to enhance the growth of plants utilized in landscaping at the project site? Assuming that this is highly likely to occur, what are the probable effects of the high nutrient levels on the anchialine ponds? Will the applicant utilize insecticides or herbicides at the project site? Since the applicant is planning on incorporating the ponds into site development plans what actions will be employed to assure the maintenance of the ponds in their pristine condition? How will the water quality of the ponds be safeguarded against the effects of pesticides? What specific means will be used to assure that no drastic alternatives to the ponds will occur? How will the ponds be protected against urban runoff if the proposal is developed? We feel this type of specific information must be included in the forthcoming revision in order to adequately assess the impacts of this proposal.

5.3.4 Potable Water System

Do the developers plan to conduct water sample tests from the supply wells identified for the proposed project? What are the contingency plans should the wells provide water with too high levels of chloride content (in excess of 1500 mg/liter)?

Where will the wells for fire flow requirements be located? To what depth will these wells be drilled? Will these wells be utilized solely for emergency fireflow requirements? How many of these wells does the applicant propose to drill?

The anchialine ponds waters are a combination of sea water and seaward percolating fresh water. They usually have low salinity levels of less than 100 ppt (MacIolek and Brock, 1976). Stephen Bowles' report on the disposal of 50,000 gpd of high-salinity brine fails to address how this flow will impact the anchialine ponds which dot the project site. To what extent will the chemical and biological composition of the ponds be affected by the brine injections?

June 22, 1981

Mr. Sidney M. Fuke

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5.9 Impact on the Archaeological and/or Historical Resources

Both the general site significance assigned by the consulting archaeologist and the scale of the development, make it extremely desirable (or a detailed Research Design to be prepared prior to undertaking the proposed salvage mitigation and data recovery program. This document should minimally include: 1) a detailed discussion of site significant, 2) specific discussion of problems and hypotheses to be examined in the course of the mitigation, 3) an extensive discussion of the methodology required to conduct the research. Upon completion the Research Design should be submitted by the applicant to the County of Hawaii Department and the State Historic Preservation Office for review prior to undertaking the salvage operations.

Recommendations appear to address only those sites which will be directly impacted (e.g. if these features or sites are to be destroyed or disturbed by the development; then they should be archaeologically excavated). What methods will be undertaken to preserve those sites which are not excavated or removed from the site? The DEIS does not state whether or not it is preferable to preserve the petroglyph sites intact/in situ (page 31). If sites are to be left intact then protection procedures should be developed and specified. Has a decision been formulated as to which sites will be preserved intact? If so, have plans been made to ensure adequate protection of these sites? If sites are to be removed and stored elsewhere have procedures for the removal, transport and curation been made?

Although most of the encountered sites have been assigned significance by the contracting archaeologist, this significance is often phrased at a general rather than specific level (e.g. midden scatters and deposits, page A-4, possible shrine page A-4, habitation shelters (page A-3)). Will the forthcoming EIS address describe these sites at a more detailed fashion? This would be useful in further determining the significance of these sites.

Comments are made throughout the Appendix on the both need for sites to be archaeologically excavated and the need for samples or total amounts of midden or rocks to be collected for analysis (e.g. page A-3 under Modified Pahoehoe Features, "samples of rocks should be collected for future analysis," and "all midden materials located beneath the rock piles should be collect." The mitigation of all archaeologically examined sites should include analysis and interpretation. These activities are not separate from an adequate mitigation plan.

The summary of recommendations for archaeological mitigation (pages 31-32) does not mention the "possible shrine site" (site 6972). Are there mitigation plans for this site? This information should be included in the summary.

13.0 Summary of Unresolved Issues

At what point will the developer consider the objectives and policies of the Hawaii Coastal Zone Management Program? Will a separate EIS be prepared along with the developer's application for a Special Management Area Permit? It seems that the preparation of one complete EIS which addresses both the proposed General Plan amendment and the SHA permit would be efficient from both the consultant's and the reviewer's point of view.

Mr. Sidney M. Fuke

June 22, 1981

P J McCARTY
PAINTER

Hawaii State Land Use Commission Hearings

On April 8, 1981 the state Land Use Commission held a hearing on Kapalaao Inc.'s request to reclassify 13.5 acres of land at Kapalaao from conservation to urban use. Why aren't the questions raised in testimonies presented at the hearing addressed in the Draft EIS? Treating the General Plan amendment request and the state land use redesignation request as separate planning actions is not in harmony with the goals and policies of the Hawaii State Plan.

Thank you for the opportunity to review this document.

Sincerely,

Diane C. Drigot

Diane C. Drigot, Ph.D.
Acting Director

KLK

cc: Kapalaao, Inc.
OEQC
Donald Bell
Joseph Halbig
George Lovelace
Jacquelin Miller
Alexis Cheong Linder
Garret Kawamura

ENVIRONMENTAL
COMMUNICATIONS
INC.

August 5, 1981

Professor Diane C. Drigot
Acting Director
Environmental Center, Crawford 317
University of Hawaii at Manoa
2550 Campus Road
Honolulu, Hawaii 96822

Dear Professor Drigot:

Subject: Draft Environmental Impact Statement (EIS) for the
Proposed Kapalua Condominium Project, Puuanahulu,
North Kona, Island of Hawaii

Thank you for your letter of June 22, 1981, on the Draft EIS for the proposed Kapalua Condominium Project, located in Puuanahulu, North Kona, Hawaii. Responses to each of the comments have been prepared and are provided below.

Comment: Statement of Objectives, "Are the project's objectives purely economic or do they address local (county) concerns?"

Response: The primary motive of any private project is to achieve economic success. In that sense, the profit from the proposed development is the objective of the project.

Comment: The economic characteristics presented in Section 2.3 should be clarified.

Response: The term "price" is used twice in the subsection (2.3) and implies the price of the units. This subsection will be reviewed and, if necessary, the terms will be clarified. The developer provided the information estimating the approximate percentage of units to be sold to Canadians. No market analysis has been prepared because of the small number of units planned and the concept of pre-selling the units. The selling of the units will be in conformance with the State's laws.

Comment: Natural Resources.

Response: Additional information on the anchialine ponds and the marine life found in the nearshore waters will be provided in the Final EIS. Discussions on the impact of the project on these two concerns will also be expanded.

Professor Diane C. Drigot
Acting Director
Environmental Center, University of Hawaii
August 5, 1981
Page 2

Professor Diane C. Drigot
Acting Director
Environmental Center, University of Hawaii
August 5, 1981
Page 3

Comment: Relationships to Land Use Plans (Section 4.0).

Response: The land use analysis represents the opinions of the preparer in her familiarity of the General Plan and the area. While elaboration can be provided, the purpose of the analysis was to consider the overall planning goals of the County. While the project is not a significant one, in terms of resort/residential development, it does fall into a class not defined in the General Plan.

The project cannot overcome the high costs of development; subsequently, the cost of the units will be high. The small size of the site and the small number of units would contain the proposed project's infringement on other resorts and residential projects. The proposed project will generate seasonal visitors to the project site who will have expenditures in form of goods and services similar to other short-term visitors.

Comment: 5.2 Impact on Water Quality and the Coastal and Marine Environment.

Response: The landscape consultants will be utilizing many plants indigenous to the area. Fertilizer and pesticide use will be minimized wherever possible. While contamination from these nutrients/chemicals are possible, the specific safeguards for these pools have not been determined at this time. The Final EIS will acknowledge the potential impact of the project on the anchialine ponds.

Comment: 5.8.4 Potable Water System.

Response: Water samples will be conducted as required. A preliminary investigation indicates that the quality of Kapalaha water should be less than 1,500 mg/l of chlorides. Also, a RO system can treat water with up to 5,000 mg/l of chlorides. The water for fire flow will come either from well(s) on site or booster pump bypass of the RO plant. The wells will be drilled to 10 feet below the groundwater table. The wells will be used mainly for fire flow. The number of wells drilled will be dependent upon the amount of water available to meet the various demands. The preliminary engineering report states that use of an injection well (based on elevation -50 feet below mean sea level) will have minimal impact. That is, the brine introduced into the salt water zone under the brackish lens will have little or no effect on the lens. The brine will mix with the salt water and essentially disappear, hence no effects to the anchialine ponds are anticipated.

Comment: 5.9 Impact on the Archaeological and/or Historical Resources.

Response: A archaeological survey report have been prepared; a detailed Research Design will be prepared when the project is given the necessary land use designation change approvals. The report will then be submitted to the State Historic Preservation Office. The details for preserving the sites and/or relocating the petroglyphs (intact) will be discussed and coordinated with the Historic Preservation Office. A copy of the archaeology report details the information on the sites. Subsequently, no further information in the text of the EIS was felt to be necessary. Specific mitigation measures will be discussed in a detailed archaeological report at the appropriate time. Site 6972L, possible shrine site, is included in the mitigation plans.

Comment: 13.0 Summary of Unresolved Issues.

Response: The Final EIS will discuss the project's relationship with the objectives and policies of the Hawaii Coastal Zone Management Program.

Comment: Hawaii State Land Use Commission Hearing; address the questions raised at the Hearing in the Final EIS.

Response: Many of the same questions were raised during the Draft EIS process, subsequently, these questions have been addressed.

We appreciate your concerns in this matter.

Very truly yours,

J. J. Rodriguez

F. J. Rodriguez

cc: Planning Department, County of Hawaii
Mr. Arnold Abe, Esq.

FJR:CKT:pl

**ENVIRONMENTAL
COMMUNICATIONS
INC.**

August 5, 1981

Mr. Melvin K. Koizumi, Director
Department of Health
State of Hawaii
P. O. Box 3378
Honolulu, Hawaii 96801

Subject: Environmental Impact Statement (EIS) for Kapalaoa Condominium Project, Puuanahulu, North Kona, Hawaii

Thank you for your letter of June 23, 1981 on the EIS for the Kapalaoa Condominium Project, Puuanahulu, North Kona, Hawaii. We have reviewed your concerns with the project engineers and would like to provide the following responses to your comments.

Comment: No indication of

Response: The previous correspondence will be included in the FEIS.

Comment: "Section 5.8.4 of the EIS informs us that the potable water supply will be from the basal groundwater and treated by a desalination plant. Please be advised that pursuant to terms and conditions of Sections 29 and 30 of Public Health Regulations, Chapter 49, Potable Water Systems, approval must be obtained by the Director of Health prior to use of any potable water source and prior to construction of any potable water facility. The successful approval from the Director of Health is based primarily on the completion and acceptance of an engineering report prepared in support of the proposed water source and the approval of construction plans and specifications."

response: The procedures as outlined will be followed at the appropriate time during the development process.

Comment: "The proposed secondary sewage treatment plant and evaporation bed shall comply with Public Health Regulations, Chapter I, Private Wastewater Treatment Works & Individual Wastewater Systems. Chapter 38 requirements include but are not limited to the following:
continuous chlorination of the effluent, fencing of the effluent disposal system to prevent direct contact with the effluent by the public, odor control, sludge disposal, and other design requirements which shall be submitted during the design review stage."

Chapter 38 response: [comment](#)

1915. 2. Sand. Sun. Cloudy. 8. 76. 60.7. 0. 0. 0. 0.

Mr. Melvin K. Kolsum, Director
Department of Health, State of Hawaii
August 5, 1981
Page 2

Comment: *A County Environmental Assessment and Policy Guideline Consistency Determination Form shall be completed and submitted to the Hawaii District Health Office before design plans and specifications are submitted to our Pollution Technical Review Branch for conceptual review.

Response: The developer or his engineering consultant will file the appropriate forms and documents when details are prepared and available. It is too premature, at this time, for the development of detailed plans.

Comment: "We also recommend that the County consider whether the proposed Underground Injection Control Program will affect the operation of the proposed water treatment facility and sewage disposal system."

Response: This comment will be acknowledged in the final version.

... previous experience will be included in the FEIS.

Comment: "Section 5.8.4 of the EIS informs us that the potable water supply will be from the basal groundwater and treated by a desalination plant. Please be advised that pursuant to terms and conditions of Sections 29 and 30 of Public Health Regulations, Chapter 49, Potable Water Systems, approval must be obtained by the Director of Health prior to use of any potable water source and prior to construction of any potable water facility. The successful approval from the Director of Health is based primarily on the completion and acceptance of an engineering report prepared in support of the proposed water source and the associated treatment plant."

Response: The procedures as outlined will be followed at the appropriate time during the development process.

Comment: "The proposed secondary sewage treatment plant and evaporation bed shall comply with Public Health Regulations, Chapter I. Private Wastewater Treatment Works & Individual Wastewater Systems. Chapter 38 requirements include but are not limited to the following:
continuous chlorination of the effluent, fencing of the effluent disposal system to prevent direct contact with the effluent by the public, odor control, sludge disposal, and other design requirements which shall be submitted during the design review stage."

Chapter 38 response: [comment](#)

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March 17, 1981

Mr. Arnold T. Abe
Page 2
March 17, 1981

Mr. Arnold T. Abe
Abe and Abe, Attorneys at Law
190 South King Street, Suite 2634
Honolulu, Hawaii 96813

Dear Mr. Abe:

The Drinking Water Program of the Department of Health has recently completed its review of the Environmental Assessment/Notice of Preparation of an Environmental Impact Statement for a 120-unit condominium project on 15.8 acres situated at Kapalua, Puunahulu, North Kona, Hawaii (TMK: 7-1-03; 5, 6, and 11). It is our understanding that the developer, Kapalua, Inc., intends to develop a domestic water source for use by the project. This source would provide brackish water for treatment to domestic quality. The treatment form has tentatively been identified as the reverse osmosis method of treatment. In view of the size and nature of the project, the water system developed to serve it will qualify as a "public water system" as defined by Chapter 49, Public Health Regulations (PHR), Potable Water Systems.

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Sections 29 and 30 of Chapter 49, PHR set forth Department of Health requirements for new sources of potable water and new and modified public water systems respectively. Under the terms of these two sections, new potable water sources serving public water systems and new or substantially modified distribution systems of public water systems must be approved by the Director of Health prior to their use to serve domestic water.

Approval of new potable water sources as required in Section 29, Chapter 49, PHR is based primarily on the submission of an engineering report which adequately addresses all concerns identified in Section 29. Concerns include the potential for source contamination, identification of existing and potential sources of contamination, source performance under normal and stress conditions, source impact on existing sources, source impact on the present aquifer, and anticipated water quality, along with many other issues. The report must be prepared by a registered professional engineer and bear the engineer's seal when submitted.

Section 30, Chapter 49, PHR requires the approval of plans and specifications of the new or modified distribution systems prior to construction. As with source approval, the primary concern is with the adequacy of design and

system capability of meeting the water quality standards set forth in Chapter 49, PHR. Once the source and distribution system are approved, the water system will be subject to the applicable terms and conditions of Chapter 49, PHR.

It has been our experience that the treatment of water for domestic use will generate waste materials which require disposal. In addition, we understand that Kapalua, Inc., proposes to dispose of "gray water" generated by the project by injection into subsurface strata while collecting "black water waste" for eventual removal to a municipal sewage treatment plant. Chapter 38, Public Health Regulations sets forward the requirements which govern the construction, operation and maintenance of private wastewater treatment works and individual wastewater systems. It is our understanding that all proposals to dispose of wastewater must be approved by the Department of Health. The Pollution Technical Review Branch (PTR) of the Department is responsible for administering the provisions of Chapter 38, PHR. We recommend that you contact the Pollution Technical Review Branch for clarification of all wastewater disposal requirements for the Kapalua, Inc., condominium project. PTR may be contacted at 548-6410.

Should you have any questions concerning the requirements of Chapter 49, PHR, please contact the Drinking Water Section at 548-2235.

Thank you for your attention to this matter.

Sincerely,

Thomas E. Arizumi

THOMAS E. ARIZUMI
Supervisor
Drinking Water Section
Sanitation Branch
Environmental Protection and
Health Services Division

MJH:dm

cc: Chief Sanitarian, Hawaii DHO
Pollution Technical Review Branch

INCLUSION: COMPLYING TO DOH'S MEMORANDUM
DATED 6/23/81

cc: Office of Attorney
Honolulu

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 515
HONOLULU, HAWAII 96809

March 30, 1981

F. J. Rodriguez
President, Environmental Communications, Inc.
P. O. Box 536
Honolulu, Hawaii 96809

Dear Mr. Rodriguez:

Past actions have denied the proposed use of sewage storage tank and transportation of such sewage to an approved treatment works. Suggest communication with our Consulting Engineer, Sylvester Ulep, Pollution Technical Review Branch phone 548-6010.

Our Drinking Water Program staff have informed me that they are reviewing your submittal and shall communicate the requirements for new potable water sources.

Our recommendation to the State Land Use Commission have been municipal drinking water and wastewater treatment systems or their equivalent are recommended as most appropriate alternatives for major developments.

Harold Matsura

HAROLD MATSURA
Chief Sanitarian, Hawaii
cc: Sylvester Ulep
PTR Branch

HH:1am

INCLOSURE COMPLYING TO DON'S MEMORANDUM
DATED 6/23/81

MAN 31 1981

13. SUMMARY OF UNRESOLVED ISSUES

The proposed project is still in the preliminary planning stages. Various issues remain to be resolved; however, until the major approvals and permits are granted, the developer is not proceeding to work out these specific concerns. Unresolved issues include:

1. Inconsistency with the County's General Plan and the Draft Kona CDP. This request for change in the General Plan designation will be reviewed and determined after the State Land Use Commission redesignates the site for Urban use (if granted).
2. Public right-of-way or access (Ordinance 439) to the will be coordinated with the County's Department of Parks and Recreation, after the initial land use changes are granted.
3. Road easement and use of State-owned lands for the access, wells, and ET system will be requested (from the Department of Land and Natural Resources) when the land use redesignation and rezoning are granted.
4. The preservation and salvaging plans will be coordinated with the Historic Sites Section of the Department of Land and Natural Resources when the request for the State easement is made.
5. The water treatment and secondary sewage system will be reviewed by the appropriate agencies upon completion of the detailed design plans.

14. LIST OF NECESSARY APPROVALS

The following major approvals and permits must be provided prior to the construction of the proposed development.

1. State Land Use Commission must approve the land use change from Conservation to Urban.
2. The County's Planning Department must approve the amendment to the Land Use Maps (General Plan) and approve rezoning of the site.
3. A Special Management Area Permit must be obtained from the County because the site lies in the SMA.
4. The State must grant the developer the easement for the access road, wells, and ET system. The Board of Land and Natural Resources must approve this action.

Approval from the State Department of Health for the proposed potable water sources is required by Section 29, Chapter 49, Public Health Regulations.

The State Department of Health will also be the approving agency for the private wastewater treatment works under Chapter 38, Public Health Regulations.

5. Acceptance of the Final EIS (prepared under Chapter 343, HRS) is required because of the County actions on the various permits.
6. Various building permits and operating permits for the water treatment and sewage treatment systems.
7. Based on the project description (no alteration to the anchialine ponds), the Department of the Army Permit will not be required.
8. A Conservation District Use Application (CDUA) from the DLNR will be required for the use of State lands for the well, access road, and evapotranspiration system (planters). The requirements imposed by that application process will be addressed at the time of the application. Without the initial land use change approvals, detailed work and filing of the CDUA would be premature.
9. The Department of Health provided the following additional information during the Draft EIS review period:

"A County Environmental Assessment and Policy Guideline Consistency Determination Form shall be completed and sub-

mitted to the Hawaii District Health Office before design plans and specifications are submitted to our Pollution Technical Review Branch for conceptual approval."

The developer or his engineering consultant will file the appropriate forms and documents when details are prepared and available. It is too premature, at this time, for the development of detailed plans.

The Department of Health also recommended that the County consider whether the proposed Underground Injection Control Program will affect the operation of the proposed water treatment facility and sewage disposal system.

15. REFERENCES

1. Soil Survey of the Island of Hawaii, State of Hawaii, U.S. Department of Agriculture, Soil Conservation Service. December 1973.
2. Ibid.
3. Atlas of Hawaii, Department of Geography, University of Hawaii, 1973.
4. Chapter 37-A Water Quality Standards, Public Health Regulations, Department of Health, State of Hawaii.
5. A Study of Past Earthquakes, Isoseismic Zones of Intensity, and Recommended Zones for Structural Design for Hawaii, by Augustine S. S. Furumoto et al, March 1973.
6. Stephen P. Bowles, "Evaluation of the Basal Brackish Lens between Anaehoomalu Bay and Kawaihae, Hawaii," August 1974.
7. Belt, Collins & Associates, Ltd., "Waikoloa Beach Resort Environmental Impact Statement."
8. Belt, Collins & Associates, Ltd., "Lalamilo Water System Environmental Impact Statement," February 1980.
9. Nuclear & Systems Sciences Group, "Water Desalting In Hawaii," prepared by Dowald et al, June 1974.
10. "Waikoloa Beach Resort Environment Impact Statement for Boise Cascade Home and Land Corporation's Planned Resort Community at Anaehoomalu, South Kohala, Island of Hawaii," 1976.
11. Stephen P. Bowles, "Hydrogeologic Investigation at Kapalaoa, North Kona, Hawaii," June 1980.
12. Maciolek, John and Richard Brock, "Aquatic Survey of the Kona Coast Ponds, Hawaii Island," Sea Grant Advisory Report, April, 1974.
13. Young, Reginald H.F., "Hydrologic and Ecologic Inventories of the Coastal Waters of West Hawaii," Technical Report #105 Water Research Center, April 1977.

APPENDIX A

SIGNIFICANCE OF ARCHAEOLOGICAL SITES AND RECOMMENDATIONS

Source: "Cultural Resources Survey at Kapalaoa, North
Kona, Hawaii", Prepared by Chiniago, Inc.,
February 1980

VI. SIGNIFICANCE OF THE SITES, AND RECOMMENDATIONS

The archaeological survey at Kapalaoa has revealed the presence of prehistoric and historic remains which are of significance to an understanding of the means employed by the aboriginal Hawaiians in adapting to their environment. Although the density of remains was not as great as had been anticipated based on knowledge of previous research at Anaehoomalu [Barrera 1971] and Kalahuipuaa [Kirch 1979], significant cultural resources are present. They possess value not only for the specific information which they contain, but also because they represent manifestations of the widespread human exploitation of the island of Hawaii. Excavation of these sites will provide archaeologists with valuable information concerning the overall demographic pattern of settlement and marine exploitation of the Hawaii Island ecosystem during the prehistoric and early historic periods.

Our specific recommendations for the sites are as follows.

PETROGLYPHS

Site 6967, Features A-H	Site 6968, Features A-K
Site 6970, Features A-AC	Site 6971, Feature F
Site 6972, Features A-K, M-R	Site 6973, Features A,
Site 6974	G-A8
Site 6975	Site 6977

Although the great majority of petroglyphs found in the survey area undoubtedly date from the historic period, a number of examples are probably prehistoric in age, including the anthropomorphic and zoomorphic figures. A detailed study of Hawaiian petroglyphs has not yet been undertaken, and for this reason it is impossible to make any definitive statements as to their meaning, either to the individuals who executed them or to the scientists who would study them. For this reason, their preservation is of great importance, for it is necessary to retain as many examples of this Hawaiian artform as possible so that they might be available for study in the future.

Recommendation: The petroglyphs should be preserved. If the area in which they are located is slated for development, they should be removed for storage in anticipation of future study. In addition, any midden materials that might be scattered about in the vicinity of the petroglyphs should be collected.

GRAVE

Site 6964 - The fact that this site is of quite recent age renders it of little significance to archaeologists.

Recommendation: The developer should determine, and strictly adhere to, Health Department rules and regulations regarding the disturbance of burial sites.

HABITATION CAVES

Sites 6979 and 6980 - These sites probably are of the most significance to archaeologists of all those found during the survey. Valuable information relative to habitation, marine exploitation, and the use and manufacture of both lithic and non-lithic tools will be forthcoming from further investigations at these sites. Site 6979 is of additional interest because of the fact that the high tide line is now above the level of the cultural deposits inside, indicating a sinking of the coastline since the time of occupation. Valuable information concerning island-wide geological processes would therefore also be found in this site. This same circumstance was observed at Anaehoomalu [Barrera m.s.] in a site that dated from the sixteenth century, indicating that Site 6979 may be of equivalent age.

Recommendation: If the development is to involve destruction of these sites, they should first be archaeologically excavated to retrieve the cultural information contained in them.

MODIFIED PAHOEHOE FEATURES

Site 6966, Feature B

Site 6969
Site 6972, Feature S

Site 6971, Feature B

Site 6973, Features B, F, AC

A number of features virtually identical to these have been found at Anaehoomalu [Barrera 1971: 60] and at Keahole Point [personal observation]. No functional interpretation of merit has as yet been forthcoming for these features. It has been suggested that they were quarry locations for the extraction of stone for artifacts. It has also been suggested that they may have served as a means of acquiring rainwater that would otherwise have been lost, by placing containers to receive water percolating through the pahoehoe bedrock. Neither of these hypotheses have been demonstrated scientifically.

Recommendation: If these features are to be disturbed by the development, samples of rock should be collected by an archaeologist for future analysis, and all midden materials located beneath the rockpiles should be collected. The development may then proceed.

HABITATION SHELTERS

Site 6965, Feature A
Site 6971, Features A, C, D

Site 6966, Feature A

All of these features are quite crude, and probably represent only temporary habitations. Although midden materials were observed at only two of these [Sites 6965A and 6971A], the possibility that such remains may be present beneath the walls where they would have been protected from deterioration by the elements gives them archaeological value.

Recommendation: If these features are to be disturbed by the development, they should first be archaeologically excavated.

WALLS AND MOUNDS

Site 6963, Features A, B
Site 6967, Feature I
Site 6973, Features C-E, AD, AE

Site 6965, Features B, C
Site 6971, Feature E

None of these sites is especially impressive to the novice, but much valuable information would be lost if they were to be destroyed without being investigated. Research at Ke-ahole Airport has demonstrated that such features as these usually contain midden materials hidden beneath them, where they have been protected from the elements [Barrera ms.]. Although none of these features is of sufficient significance to warrant their preservation, all should be archaeologically excavated.

Recommendation: If these features are to be destroyed by the development, they should be dismantled and any midden materials found beneath them should be saved for analysis.

HABITATION TERRACE

Site 6981B - The demonstrated presence of cultural materials, and especially the presence of information concerning the prehistoric period, gives this site considerable significance.

erable significance.

Recommendation: If the site is to be disturbed by the development, it should be archaeologically excavated.

POSSIBLE SHRINE

Site 6972L - The presence of relatively abundant midden materials at this feature give it archaeological importance, and its study should provide archaeologists with valuable information concerning aboriginal religious practices.

Recommendation: If the site is to be disturbed by the development, it should be archaeologically excavated.

MIDDEN SCATTERS AND DEPOSITS

Site 6976

Site 6978

Site 6981, Feature A

The demonstrated presence of cultural materials, and the likelihood of the presence of information concerning the prehistoric period, gives these sites significance.

Recommendation: If these sites are to be disturbed by the development, they should be archaeologically excavated.

TRAIL

Site 6982 - The primary value of a trail is in what it can tell archaeologists about prehistoric communication networks, and this information can be derived from studies of aerial photographs. The physical manifestation of the site is of interest primarily for its visual effect, and is of little archaeological value.

Recommendation: No further archaeological work is necessary at this site.

SITE	TYPE	Recommended Action
6963 A	Wall	Archaeological Excavation
6963 B	Wall	Archaeological Excavation
6964	Grave	Consult Health Department
6965 A	Habitation Shelter	Archaeological Excavation
6965 B	Wall	Archaeological Excavation
6965 C	Mound	Archaeological Excavation
6966 A	Habitation Shelter	Archaeological Excavation
6966 B	Modified Bedrock	Collect Samples
6967 A-H	Petroglyphs	Preserve
6967 I	Mound	Archaeological Excavation
6968	Petroglyphs	Preserve
6969	Modified Bedrock	Collect Samples
6970	Petroglyphs	Preserve
6971 A	Habitation Shelter	Archaeological Excavation
6971 B	Modified Bedrock	Collect Samples
6971 C & D	Habitation Shelter	Archaeological Excavation
6971 E	Mound and Wall	Archaeological Excavation
6971 F	Petroglyphs	Preserve
6972 A-K	Petroglyphs	Preserve
6972 L	Possible Shrine	Archaeological Excavation
6972 M-R	Petroglyphs	Preserve
6972 S	Modified Bedrock	Collect Samples
6973 A	Petroglyph	Preserve
6973 B	Modified Bedrock	Collect Samples
6973 C-E	Mounds	Archaeological Excavation
6973 F	Modified Bedrock	Collect Samples
6973 G-AB	Petroglyphs	Preserve
6973 AC	Modified Bedrock	Collect Samples
6973 AD & AE	Mounds	Archaeological Excavation
6974	Petroglyphs	Preserve
6975	Petroglyph	Preserve
6976	Midden Scatter	Archaeological Excavation
6977	Petroglyph	Preserve
6978	Midden Scatter	Archaeological Excavation
6979	Habitation Cave	Archaeological Excavation
6980	Habitation Cave	Archaeological Excavation
6981 A	Midden Deposit	Archaeological Excavation
6981 B	Habitation Terrace	Archaeological Excavation
6982	Trail	No Further Action Required

Table 1. Summary of Sites and Recommendations.

APPENDIX B

**EVALUATION OF THE COASTAL ZONE MANAGEMENT
OBJECTIVES AND POLICIES**

APPENDIX B

HAWAII CZM PROGRAM
ASSESSMENT FORMAT

RECREATIONAL RESOURCES

Objective: Provide coastal recreational opportunities accessible to the public.

Policies

- 1) Improve coordination and funding of coastal recreation planning and management.
- 2) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:
 - a) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;
 - b) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites and sandy beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;
 - c) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;
 - d) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;
 - e) Encouraging expanded public recreational use of County, State, and Federally owned or controlled shoreline lands and waters having recreational value;
 - f) Adopting water quality standards and regulating point and non-point sources of pollution to protect and where feasible, restore the recreational value of coastal waters;
 - g) Developing new shoreline recreational opportunities, where appropriate, such as artificial reefs for surfing and fishing;
 - h) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, county planning commissions; and crediting such dedication against the requirements of section 46-6.

Preliminary Evaluation for the Proposed Kapalaoa Condominium Project

Discussion:

- a) The coastal resources (shoreline and anchialine ponds) related to recreational activities will not be significantly affected and will be remained in its natural state wherever possible. The plans call for little or no modifications to the ponds.
- b) Not applicable.
- c) Other adjacent areas are utilized for public recreation as discussed in the section on recreation.
- d) In a five (5) mile radius from the project, there are several County owned as well as privately owned recreational facilities available to the public. These are described in detail in section 3.11.2.
- e) The project curtails the expansion of governmental park expansions.
- f) Not applicable.
- g) Not applicable.
- h) A public right-of-way may be included in the development plan; this depends on discussions with the Department of Parks and Recreation, County of Hawaii.

Preliminary Evaluation for the Proposed Kapalaoa Condominium Project

HISTORIC RESOURCES

Objective: Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies:

- 1) Identify and analyze significant archaeological resources;
- 2) Maximize information retention through preservation of remains and artifacts or salvage operations;
- 3) Support State goals for protection, restoration, interpretation, and display of historic resources.

Discussion:

The project property has already been modified from its original, pre-1778 condition. Its past use has primarily been single-family housing and recreational uses.

- 1) This has been done.
- 2) This is being recommended as per page A-5.
- 3) This is the intent of the applicant/developer.

Preliminary Evaluation of the Proposed Kapalaoa Condominium Project

COASTAL HAZARDS

Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, and subsidence.

Policies:

- 1) Develop and communicate adequate information on storm wave, tsunami, flood, erosion, and subsidence hazard;
- 2) Control development in areas subject to storm wave, tsunami, flood, erosion, and subsidence hazard;
- 3) Ensure that developments comply with requirements of the Federal Flood Insurance Program;
- 4) Prevent coastal flooding from inland projects.

Discussion:

The proposed project will include building pads at elevation 13-feet above mean sea level, in order to flood-proof the structures. The site is not subject to significant or severe erosion or subsidence hazard.

- 1) This will be provided.
- 2) Mitigation measure are planned to flood-proof the structure.
- 3) Yes.
- 4) No inland areas will be affected.

Preliminary Evaluation for the Proposed Kapalaoa Condominium Project

SCENIC AND OPEN SPACE RESOURCES

Objective: Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Polices:

- 1) Identify valued scenic resources in the coastal zone management area;
- 2) Insure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;
- 3) Preserve, maintain and, where desirable, improve and restore shoreline open space and scenic resources;
- 4) Encourage those developments which are not coastal dependent to locate in inland areas.

Discussion:

Presently the project site is vacant, covered with weeds and grasses or bare ground, and three anchialine ponds. Potential does exist for landscaping the project site so that it can be a scenic area. It is presently in open space use.

- 1) The shoreline and anchialine ponds are felt to be valued as scenic resources. The proposed project will not significantly affect these areas.
- 2) Landscaping along the shoreline and between structures will enhance the project site and tend to "soften" the appearance of the development from public view from the Highway (Queen Kaahumanu).
- 3) This project will not improve and/or restore shoreline open space and scenic resources.
- 4) The enhancement of the coastal environment is a principal asset of this project.

Preliminary Evaluation of the Proposed Kapalaoa Condominium Project

MANAGING DEVELOPMENT

Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Policies:

- 1) Effectively utilize and implement existing law to the maximum extent possible in managing present and future coastal zone development;
- 2) Facilitate timely processing of application for development permits and resolve conflicting permit requirements;
- 3) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.

Discussion:

Not applicable.

Preliminary Evaluation of the Proposed Kapalaoa Condominium Project

COASTAL ECOSYSTEMS

Objective: Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

Policies:

- 1) Improve the technical basis for natural resource management;
- 2) Preserve valuable coastal ecosystems of significant biological or economic importance;
- 3) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs;
- 4) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate State water quality standards.

Discussion:

The EIS describes mitigation measures for the anticipated adverse environmental impacts. Governmental regulations, permits and approvals will also play an important role in determining the extent of environmental degradation and whether the project is acceptable and meeting the applicable Federal, State, and County regulations, ordinances, laws, codes, and standards.

Preliminary Evaluation of the Proposed Kapalaoa Condominium Project

ECONOMIC USES

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies:

- 1) Concentrate in appropriate areas the location of coastal dependent development necessary to the State's economy;
- 2) Insure that coastal dependent development such as harbors and ports, visitor industry facilities, and energy generating facilities are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area;
- 3) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such development and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:
 - a) Utilization of presently designated locations is not feasible;
 - b) Adverse environmental effects are minimized;
 - c) Important to the State's economy.

Discussion:

The proposed development will provide a suitable location for residential use because the nature of the proposed action is similar to that of the nearby resort/residential developments in South Kohala.

FEDERAL CONSISTENCY
SUPPLEMENTAL INFORMATION FORM

Date: July 31, 1981

Project/Activity Title or Description: Kapalaoa Condominium

Location: Island Hawaii District North Kona

Tax Map Key No. 7-1-03: 5, 6, and 11

Other applicable area(s), if appropriate _____

Est. Start Date: 1983 Est. Duration: 24 months

APPLICANT

Name & Title Kapalaoa, Inc.

Agency/Organization c/o Arnold Abe, Attorney-at-Law

Address Suite 2634, Pacific Trade Center

190 South King Street, Honolulu, Hawaii Zip 96813

Telephone No. during business hours:

A/C (808) 524-4925

A/C () _____

AGENT

Name & Title Environmental Communications, Inc.

Agency/Organization _____

Address P. O. Box 536

Honolulu, Hawaii Zip 96809

Telephone No. during business hours:

A/C (808) 521-8391

A/C () _____

CATEGORY OF APPLICATION (check one only)

- [] I. Federal Activity [] III. OCS Plan/Permit
[] II. Permit or License [] IV. Grants & Assistance

TYPE OF STATEMENT (check one only)

- [x] Consistency
[] General Consistency (Category I only)
[] Negative Determination (Category I only)
[] Non-Consistency (Category I only)

APPROVING FEDERAL AGENCY (Categories II, III, & IV only)

Agency _____

Contact Person _____

Telephone No. during business hours:

A/C () _____

A/C () _____

FEDERAL AUTHORITY FOR ACTIVITY

Title of Law _____

Section _____

OTHER STATE AND COUNTY APPROVALS REQUIRED

Agency	Type of Approval	Date of Applic.	Status
Land Use Commission	Boundary Change	6/26/80	Pending
Planning Dept., County of Hawaii	Gen.Plan Amend.	2/03/81	Pending
" " " "	SMA	Not Yet	_____
DLNR	CDUA	Not Yet	_____

CZM 9/79

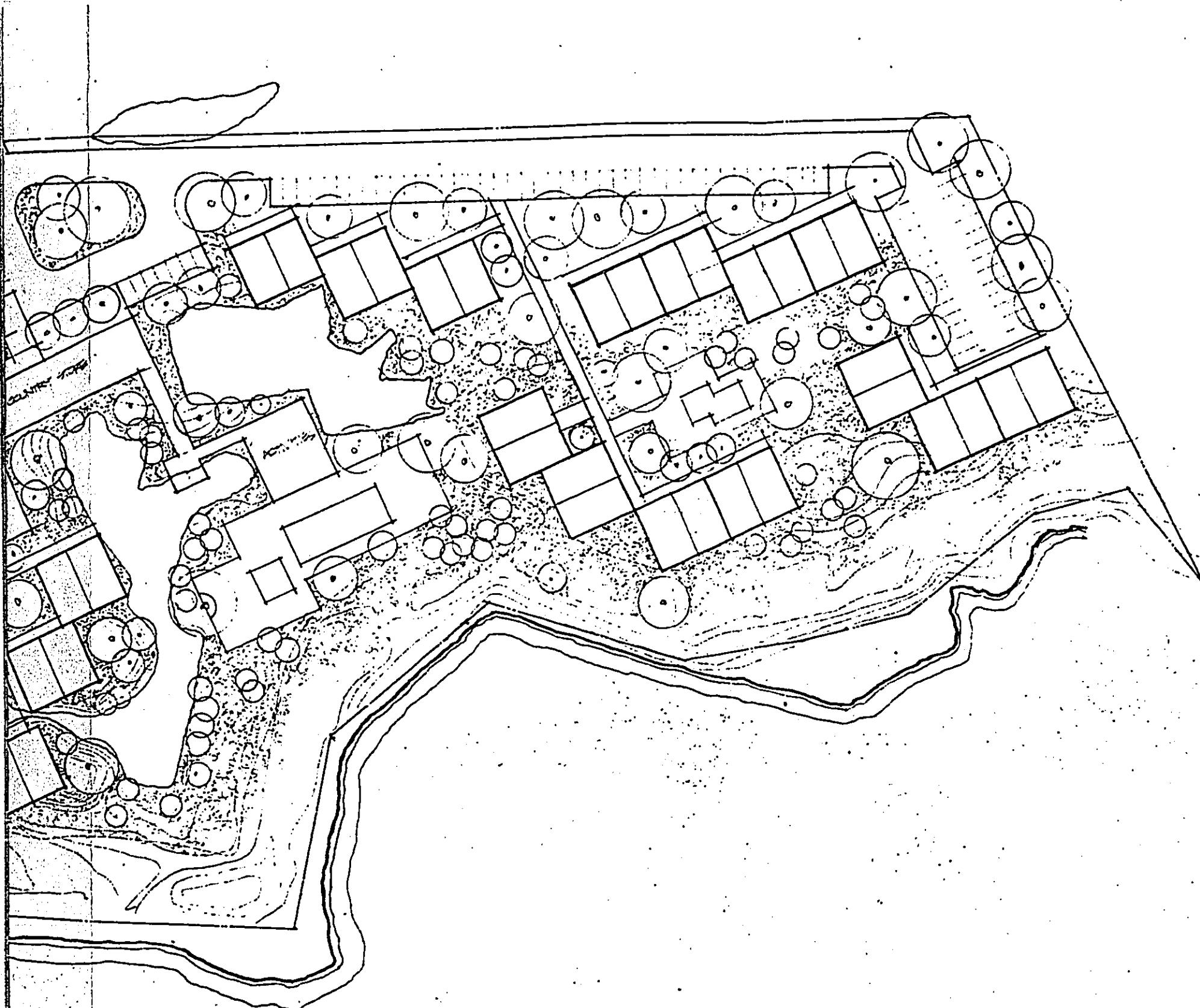
- Figure 2.** Development Plan - Kapalaoa Condominium Project
- Figure 4.** North Kona - Kapalaoa Development, Proposed Access to Property from Queen Kaahumanu Highway
- Figure 6.** Topographic Survey Map - Includes Figures 6-A, 6-B

83-001

83-002

83-003

83.004



HOUSING	UNITS
40 ± N(5)	40
60 ± N(5)	60
TOTAL	120 UNITS



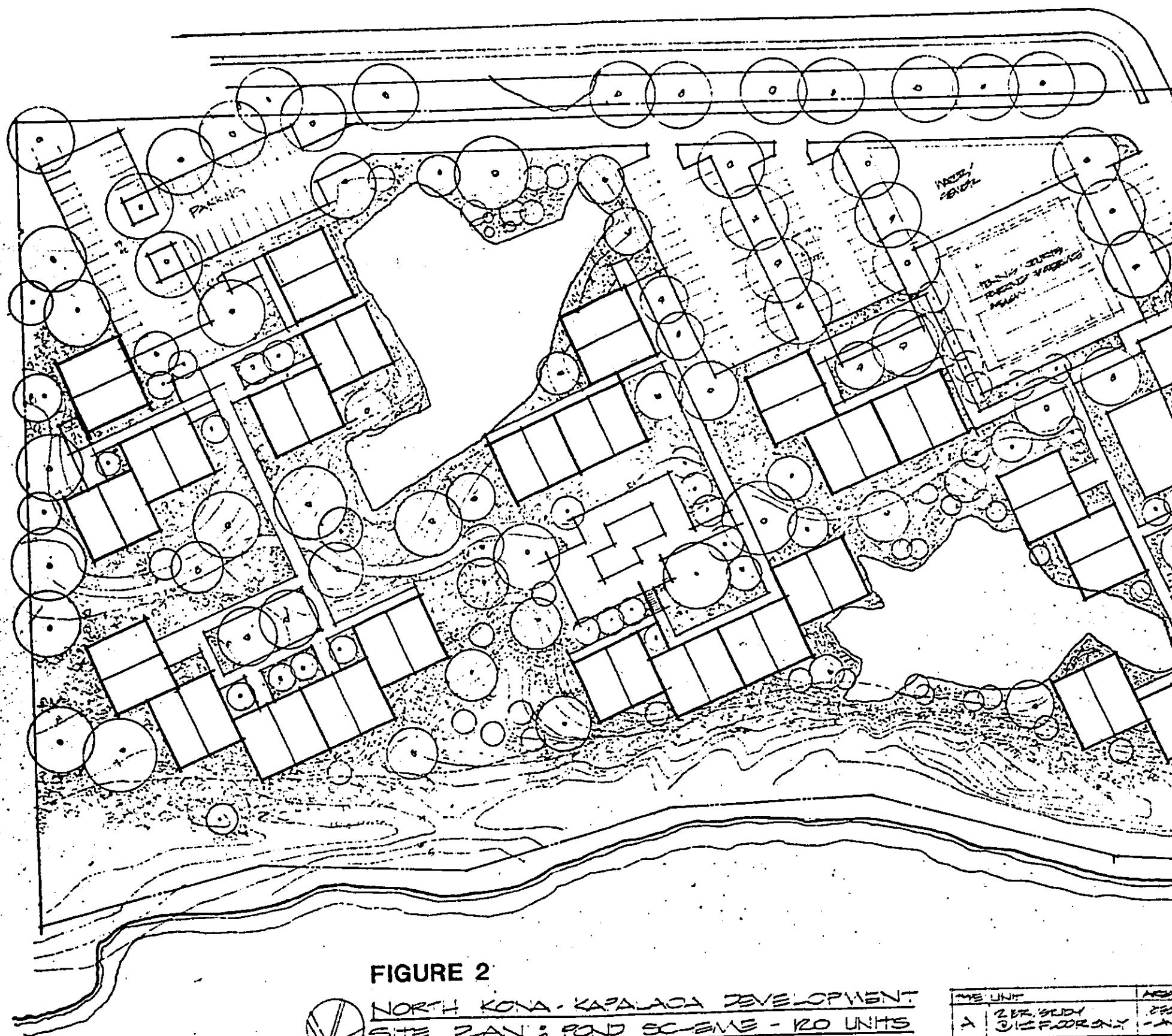


FIGURE 2

NORTH KONA-KAPALUA DEVELOPMENT
SITE PLAN : POND SCHEME - 120 UNITS

 SCALE 1" = 10'-0"
ANNE ARUGA & SHIN ARCHITECTS

TYPE UNIT	2 BR. BDRY	3 BR. FLOOR ONLY	4 BR. FLOOR ONLY
A	2 BR. BDRY	3 BR. FLOOR ONLY	4 BR. FLOOR ONLY
B	2 BR. BDRY	3 BR. FLOOR ONLY	4 BR. FLOOR ONLY